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ADOLF ERIC NORDENSKJÖLD,

THE DISCOVERER OF THE NORTH-EAST PASSAGE.

WE have no information as to the size and weight of the man whose portrait is before us, but we are impressed that he is above the medium size, and that his head is rather large; there also appears to be balance and harmony between the head and the body; and also between the different parts of the head.

The face indicates strength; there is breadth of cheek-bone, a strong nose, a well-marked and strong chin, and there are a seriousness and a sincerity about the expression of the eye, which tend to give confidence in the man's power and purpose. He looks as if he did his own thinking, and felt competent to reach conclusions that are both useful and safe. There also seems to be no tendency to display; he would fight a battle if he were a military man, and not humiliate those whom he had defeated, by a flush of power. If he had been in Gen. Grant's place at the close of our war, like him, he would have avoided a parade in Richmond.

In that massive forehead, the phrenologist sees across the lower half of it great talent for scientific knowledge and practical talent; in the upper half of the forehead he sees philosophy, originality, power of criticism, ability to calculate consequences, and to plan such work as he has to carry out himself, and make the plan and the execution harmonious. He would have excelled in literature, in art, in natural philosophy, and in languages.

If the reader will observe how the head swells on each side, upward and backward from the outer corner of the eye across the temples, he will see the mathematical, the mechanical, the inventive, and the mental organs which enable a man to make circumstances available; the head is wide as we go back from the temple, showing a tendency to economy executive ability, guardedness of expression, courage, and force of character, presided over by prudence. The height of the head from the opening of the ear it will be observed is quite considerable, showing firmness, integrity, self-reliance, respect for superiority, and kindly sympathy for those who are in trouble, together with that faith which gives courage and strength to work in prospect of future results.

The face indicates strong social power; a tendency to make friends without any great ado, winning people to his side and his cause by sincerity and frankness. He probably has a great many staunch friends, and while he never flatters a man, he treats him justly and kindly and confidingly, and thus enlists him in his own behalf. There are few men who have occupied an influential place, and who have had friends who were more loyal than Prof. Nordenskjöld's friends are to him.

His health, strength, and harmony of body, and the power to sustain a large brain for arduous duty, are marked in his whole constitution. There may be men who are tougher than he, but his vital and locomotive forces are so well harmonized that they co-ordinate and supplement each other, and thus contribute health, strength, endurance, and that blessed self-hood that gives self-command.

THE spirit of adventure has led to a series of expeditions to the Arctic regions during the past ten years, expeditions for the most part furnished at great expense, and conducted with much skill, but resulting in little else than those experiences amid ice-fields and barren land which are fraught with suffering and disaster to the bold explorers. We may read with wonder the story told by survivors of an attempt to solve the mysteries of the polar land or sea, but we can not suppress the practical question, *Cui bono?* For what has so much been risked? What substantial profit has come from the large expenditure of money, time, and life? The voyage of Lieutenant Schwatka, to be sure, put to rest all doubt

with regard to the fate of Sir John Franklin and his company, by the finding of many remains of that expedition of so many years ago, scattered along the inhospitable shores of King William's Land, but that and a few new facts of geographical interest, and the record of heroic endurance, comprise the results of an extraordinary undertaking.

The researches of Prof. Nordenskjöld do not belong to the class of Arctic adventurings which we have just considered, but to the domain of science, as they have been undertaken by one whose birth and early education were Scandinavian, and his professional training in a great degree was conducted with reference to the systematic examination of new lands within the circle of the Midnight Sun.

Adolf Eric Nordenskjöld was born at Helsingfors, Finland, on the 18th of November, 1832. His family is one of much distinction in the educated circles of Finnish people, his ancestors being known for the possession of superior mental capabilities, in which those applicable to the study of nature and to physical research were specially active. His father began life as a lawyer, but relinquished that profession for the study of natural philosophy; and having completed a course in chemistry and mineralogy at Stockholm, under the direction of the eminent Berzelius, and a course in mining at Upsala, he returned to Finland, where he entered the Mining Board, of which he afterward became the chief. In the prosecution of geographical and mining studies he traveled extensively in his own and foreign countries, and added considerably to the general stock of information, not alone by many discoveries of importance in mineralogy, but also by the publication of his conclusions in relation to geological questions. In the course of his active career he accumulated a large cabinet of minerals and curiosities, and it is not surprising that his son, born and growing up amid such influences, should have been impressed with the love of research, and early manifested it.

When thirteen years of age Adolf entered college, and under the training of able tutors the home influences were so fostered in him that at nineteen he passed to the University, where he devoted himself to the study of geology, mineralogy, and chemistry. During the vacations he sometimes accompanied his father on his travels, at one time visiting with him the Ural to examine the mines at Tagalsk belonging to the Demidoff family.

Having provoked the ill-feeling of the then Russian ruler of Finland, by a too liberal expression of his political opinions, it was intimated that a voluntary exile would be convenient for him. In consequence he gave up one or two positions which were of service to him in a pecuniary sense, and left Finland and went to Berlin, where he continued his studies. Returning home, he received his doctor's degree, but again encountered the displeasure of the Russian authorities, and finding that no hopes of promotion could be entertained in such a relation, he went to Sweden in 1858, where he has since resided, and of which country he is now a naturalized subject. In the same year he took part in an expedition to Spitzbergen, where he made several interesting discoveries, and on his return was appointed Professor and Intendant of the Imperial Museum at Stockholm, and in this capacity, in 1861, and again in 1864 and 1868, visited Spitzbergen; his ship, the *Sophia*, in this last visit reaching as far north as 82° 41′ latitude.

In 1870 he visited Greenland, and made himself thoroughly familiar with the exigencies of Arctic exploration. Two years later, at the expense of Mr. Oscar Dickson, who had largely borne the cost of previous expeditions, he once more started for Spitzbergen, with the hope of being able from thence to commence a journey over the ice to the North Pole, but a succession of accidents compelled his return. In 1875 and 1876 he made other visits, but the crowning act of his life so far has been the Vega Expedition of 1878 and 1879, when, in company with Captain Palander, a naval officer of uncommon nautical ability, he was enabled success-

fully to face the trials of two successive years' journeying in Arctic waters, without the loss of one of the crew, and also without illness.

The progress of this remarkable journey—which solved the problem, a far more practical one than that of the North Pole, which had interested the leading navigators and the foremost commercial states for hundreds of years, of a northeast passage to China and Japan, and the circumnavigation of the Old World—has been told with minute detail, and forms one of the most interesting chapters in the history of ocean navigation. On their homeward voyage *via.* the Pacific and Indian Oceans, the Mediterranean Sea, the Atlantic and North Sea, etc., to Stockholm, honors were showered upon Professor Nordenskjöld and Captain Palander, the former of whom is now a member of thirty scientific societies, the holder of the gold medal of the Royal Geographical societies of England and France, and decorated with numerous stars and crosses, the gifts of his own sovereign and of other monarchs.

A writer in *Nature*, in reviewing his work, said: "No one man has done half so much as Baron Nordenskjöld for a scientific exploration of the Arctic regions. The most striking characteristics of his various expeditions have been the small expense at which they were conducted, their modest, but carefully considered equipment, the clear and scientific methods on which they were planned, and the wealth and high value of the results obtained."

Baron Nordenskjöld represented the capital of Sweden in the National Diet from 1869 to 1871, and was instrumental in bringing about some important legislative measures for the promotion of science. He is a genial man, averse to public display, and with a disposition to retirement from notice, which is rare among travelers, especially the adventurous sort who are known to the public today.

PORTRAIT.

Joy came too late, and a calm despair
Drew lines of gray in the silken hair.
Waiting and watching for hours and hours
Faded the bloom of life's fairest flowers;
And softest eyes by their unshed tears
Grew dim and cold with the passing years.

And love, with its pure and passionate glow,
Grew white and still as the fallen snow,
And the heart that had burned with holy fire
Lost all its warmth and its fond desire.

What paled the eyes and faded the bloom
Enwrapped the mind in perpetual gloom.

So the old, old tale in the calm, sweet face,
The soft, cold eyes and the stately grace,
And the hair a mantle of silver sheen
Is told to the passer-by, I ween.
And the women who dream and sigh in vain
May gaze on this picture to still their pain.

MARGARET WINCHESTER.

OUR ANCESTORS.

THERE are few questions more immediately interesting to Englishmen than the question, Who are our ancestors? From what elements and in what proportions are we compounded? May we consider ourselves as all pure Teutons? or are we partly Celts as well? Furthermore, may we even reckon among our immediate ancestry some still earlier and less historical races than either of these? Such questions are full of practical importance to ourselves, and they are also of a sort upon which modern investigations into language and the science of man have cast a strikingly new and unexpected light.

Of course, in considering the origin of Englishmen, we must look at the matter

in no petty provincial spirit. We must include roughly in that general name Welshmen, Scotchmen, and Irishmen as well; and if our friends in the north prefer to speak of Britain rather than of England, I am sure I for my part will have no objection. There are many learned modern historians, with Mr. Freeman at their head, who will tell us that Englishmen are almost pure-blooded Teutons—of the same original stock as the Germans, the Dutch, the Danes, and the Norwegians. But when we come to inquire more fully into their meaning, it turns out that they are speaking only of the native inhabitants of England proper and the Scotch Lowlands, without taking into consideration at all the people of Wales, Ireland, and the Highlands, or the numerous descendants of immigrants from those districts into the south-eastern half of Great Britain. Even in the restricted England itself, these same doughty Teutonic advocates admit that there is a nearly pure Celtic (or pre-Celtic) population in Cornwall, in Cumberland, and in Westmoreland; while the western half of the Lowlands, from Glasgow to the border, is also allowed to be inhabited by a mainly Welsh race. Furthermore, it is pretty generally granted by our stoutest Teutonic champions themselves that the people of Dorset, Somerset, and Devon; of Lancashire, Cheshire, Shropshire, Herefordshire, and Worcestershire, are all largely mingled with Celtic blood. Thus, in the end, it appears that only the native inhabitants of the Lothians and the eastern and southern coast of England are claimed as pure Teutons, even by those who most loudly assert the essentially Teutonic origin of the English people. We may possibly find that this little Teutonic belt or border itself is not without a fair sprinkling of earlier blood.

Perhaps the best way to clear up this question will be to glance briefly at the various races which have inhabited these islands, one after another, and then to inquire how far their descendants still exist in our midst, how large a proportion of our blood they have contributed, and whereabouts their representatives are now mainly to be found. Of course, in such an inquiry we can only arrive at very approximate results, for, in our present advanced stage of intermixture, it is almost impossible for any man to say exactly what are the proportions of various races, even in his own person. Each of us is descended from two parents, four grandparents, eight great-grandparents, and so forth; so that, unless we could hunt up our pedigrees in every direction for ten generations, involving a knowledge of no less than 1,024 different persons at the tenth stage backward, we could not even say how far we ourselves were descended from Irish, Scotch, Welsh, or English ancestors respectively. As a matter of fact, every one of us is now, probably, a very mixed product indeed of Teutonic, Celtic, and still earlier elements, which we can not practically unravel; and, perhaps, all we can really do is to point out that here one kind of blood is predominant, there another, and yonder again a third.

The men of the very earliest race that ever lived in England are probably not in any sense our ancestors. They were those black fellows of the palæolithic or older stone age, whose flint implements and other remains we find buried in the loose earth of the river-drift or under the concreted floors of caves, and who dwelt in Britain while it was yet a part of the mainland, with a cold climate like that of modern Siberia. These people seemed to have lived before and between the recurrent cold cycles of the great glacial period, and they were probably all swept away by the last of those long chilly spells, when almost the whole of England was covered by a vast sheet of glaciers, like Greenland in our own time. Since their days Britain has been submerged beneath several hundred feet of sea, raised again, joined to the continent, and once more finally separated from it by the English Channel and the Straits of Dover. Meanwhile our own original ancestors — the people from whom by

long modification we ourselves are at last descended—were probably living away in the warmer south, and there developing the higher physical and intellectual powers by which they were ultimately enabled to overrun the whole northern part of the Old World. Accordingly, interesting as these older stone-age savages undoubtedly are — low-browed, fierce-jawed, crouching creatures, inferior even to the existing Australians or Andaman Islanders—they have yet no proper place in a pedigree of the modern English people. They were the aboriginal inhabitants of Britain; but their blood is probably quite unrepresented among the Englishmen of the present day.

Long after these black fellows, however, and long after the glaciers of the ice age had cleared off the face of the country, a second race occupied Britain, some of whose descendants almost undoubtedly exist in our midst at the present day. These were the neolithic or later stone-age men, who have been identified, with great probability, as a branch of the same isolated Basque or Euskarian race which now lives among the valleys of the Western Pyrenees and the Asturias Mountains. They seem to have crossed over into Britain while it was still connected with the Continent by a broad isthmus, or perhaps even by a long stretch of land occupying the entire beds of the Channel and the German Ocean. Our knowledge of them is mainly derived from their tombs or barrows — great heaps of earth which they piled up above the bodies of their dead chieftains. From these have been taken their skeletons, their weapons, their domestic utensils, and their ornaments—all the latter objects having been buried with the corpse for the use of the ghost in the other world. From an examination of these remains we are able largely to reconstruct the life of the Euskarian people—the earliest inhabitants of Britain whose blood is still largely represented in the existing population.

In stature the neolithic men were short and thick-set, not often exceeding five feet four inches. In complexion they were probably white, but swarthy, like the darkest Italians and Spaniards or even the Moors. Their skulls were very long and narrow, and they form the best distinguishing mark of the race, as well as the best of its survival at the present day. The neoliths were unacquainted with the use of metal, but they employed weapons and implements of stone—not rudely chipped like those of the older stone-age, but carefully ground and polished. They made pottery too, and wove cloth; they domesticated pigs and cattle; and they cultivated coarse cereals in the little plots which they cleared out of the forests with their stone hatchets or tomahawks. In general culture they were about at the same level as the more advanced Polynesian tribes when they first came into contact with European civilization. The barrows which they raised over their dead chieftains were long and rather narrow, not round like those of the later Celtic conquerors. They appear to have lived for the most part in little stockaded villages, each occupying a small clearing in the river valleys, and ruled over by a single chief; and the barrows usually cap the summit of the boundary hills which overlook the little dales. Inside them are long chambered galleries of large rough-hewn stones, and when these primitive erections are laid bare by the decay or removal of the barrow, they form the so-called "Druidical monuments" of old-fashioned antiquaries, a few of which are Celtic, but the greater part Euskarian.

For the moment it will suffice to point out that before the arrival of the Celts and other Aryan tribes in Britain, these Euskarians spread over the whole of our islands, and were apparently the only people then inhabiting them. At least the monuments of this date—perhaps from 5,000 to 20,000 years old—seem to be similar in type wherever they occur in Britain, and to contain the remains of an essentially identical race. I shall also add here, by anticipation, what I hope to

show more in detail hereafter, that their descendants exist almost unmixed at the present day as the so-called Black Celts in certain parts of Western Ireland and Scotland, and in a few places in South Wales; while their blood may be still traced in a more mixed condition in Yorkshire, Lincolnshire, East Anglia, the Scotch Highlands, and many other districts of England and Scotland. How they have managed to survive and to outlive the various later Celtic and Teutonic conquests we shall have to inquire when we come to consider the origin and progress of those subsequent waves of population.—GRANT ALLEN in *Knowledge*.

VEGETABLE LIFE—GRASSES.

THERE is nothing like a vital principle existing in the mineral or fossil kingdom. The mystery of life pervades the entire vegetable and animal tribes, being present in the simple cell of the lowest organism. Every form of vegetable life derives its nourishment from inorganic matter—that is, from substances—either fluid or gaseous, in which, under no condition, has the principle of life ever existed.

The mystery of vitality is something beyond mere physical organization. We may plant the seed and watch the wonders of germination; we may trace the developing beauties of the flower through its brief summer day, until only the dry stalks and brown ripened seeds remain again, but all those glowing phenomena were only the results of a more wonderful unseen process—the *vitality*, divinely given, and without which all human care would be vain.

Life, whether animal or vegetable, is a source of unceasing activity, and the vital essence of the plant is never at rest any more than are the throbbing pulses of our own highly-wrought organisms.

We have before briefly alluded to the fluid secretions which pervade all vegetation, and which are peculiarly abundant in the new growth, and about the spongioles of the roots, and the pores of the fresh, growing leaves—in fact that portion of the plant which assimilates the food and produces the growth. To this living substance, Dr. Muhl, its discoverer, has given the general name of *Protoplasm*.

Though not yet thoroughly understood in all its processes and changes, yet among its constituents and products are all the chemical elements and compounds found in the plant, and endless changes are there constantly going on. This protoplasm, or life activity, never ceases, and

SACCHARUM—SUGAR-CANE.

is even more plainly discernible in the lower organisms than when inclosed in the walls of cells, which are themselves results of protoplasmic action.

Allusion has been made to the yellow dust—pollen—existing in the anthers of the stamens. In the pollen grains is supposed to exist the initial form of vegeta-

ble life, or protoplasm. Pollen grains vary in form, but preserve their identity in the same family of plants, and their mechanism and action is, perhaps, the greatest wonder of the plant.

Each pollen atom is perfect in itself, and consists of a tiny membranous sac filled with a fluid, in which exist minute molecules in ceaseless motion, which are, as far as has yet been discovered, the first principle of life. When the pollen is mature, it is detached from the protect-

Dhoura—Egyptian Maize.

ing anther, and the greater part of it is blown away. A few grains falling upon the stigma burst their coverings and are conveyed by the tissues of the style to the germ, and there develop new protoplasmic cells, and assume another form as the vital embryo in the seed. This vitality, under favorable circumstances, is truly wonderful. Lindley raised some raspberry plants from seeds taken from the stomach of a human skeleton which was found thirty feet below the surface of the ground, and which was apparently of great antiquity.

The seeds of some plants retain their vitality longer than their powers of reproduction. The balsam *Impatians* is an example. The seeds, when several years old, produce a much larger proportion of double flowers—non-seed bearing—than when new, and are, therefore, more highly prized for the garden than fresh seeds, which produce only single flowers, but vital seed, by which alone the plant is perpetuated.

Flowers, fruits, and grains had their respective presiding divinities in the ancient heathen world, and Ceres, the goddess of harvests, was represented with clusters of grain and poppies in her hands.

Of the vegetable families which deserve more than a passing notice, the *Gramineæ*—Grasses—are the most abundant and important. They provide the *staple* of food, both for men and animals. Of the four thousand known species, none are essentially poisonous, one or two varieties only being suspicious. The family possesses characteristics which enable it to be distinguished at a glance, though the differences in many species are very slight. Climate, soil, and location often effect these changes, while certain traits pervade the entire order. Grasses have hollow, jointed stems—*culms*—and linear leaves; the roots are fibrous, and the seeds one-lobed—*monocotyledonous*. The flowers are inconspicuous and possess but little coloring, and the floral organs are inclosed in imbricated bracts called *glumes*, or the husk of the grain. There is generally neither calyx nor corolla. The nutritious qualities reside both in the stalks and foliage, as well as in the grains—the two former as food for animals, and the last for animals and man.

Bounded by neither zone nor altitude, wherever a summit has uplifted itself from the ocean, the grasses have clasped their arms about it. They develop into trees in the tropics, they spread their soft tapestry about the temperate zones, and cling in tufts and clumps to the thin soil in the colder wastes. In the Falkland Islands, auks, penguins, and sea-lions find

shelter in the long overarching leaves of the tussack grass.

The vital tissues of the Graminæ are in

PAPYRUS ORIENTALIS.

the *center* of the stalk, pushing the growth outward; hence they rank among the *Endogens* or *inside-growers*. The various grains—cereals—live but one or two years, dying after the seed is perfected, while many of the grasses exist for an unknown period.

The different grains have been found in the cultivated portions of the earth ever since man has lived by the "sweat of his brow," nor can any particular country be named as the home of their nativity, though probably after the flood many of the fruits and grains were derived from Southwestern Asia. Wheat grains have been found in the ruins of the lake dwellers of Switzerland, and also in the mummy cases of the Pharaohs. Cultivation has developed many varieties of this grain with varying degrees of hardihood.

The Norwegian peasant sows barley where the frost remains in the ground at the depth of three feet during the year, and in favorable seasons the grain ripens in the midst of lichens and reindeer moss.

Maize, or Indian corn, is indigenous to the western world. This grain was held in great esteem by the aborigines, and was particularly revered by the Mexicans. The old chroniclers told wonderful tales of the artificial gardens of Montezuma adorned with Maize, bearing leaves of wrought silver and awns and anthers of gold.

The oat—Avena—was found wild on the island of Juan Fernandez, and is now cultivated on both continents as one of the common grains. Rice is the most valuable of the grain-bearing grasses, furnishing, as it does, food for more than one-sixth of the entire inhabitants of the world. The most densely populated districts in Asia are supported entirely, or very nearly so, on the products of the rice-fields, and famine follows a failure of the rice crop. The cultivation of this grain is very laborious, the plants requiring to be pruned and several times transplanted in Oriental culture.

Some of the rarest perfumes of olden times were obtained from the Graminæ. These almost priceless grasses were found on the desert plains of Central Asia, where they still exist, growing in tufts amid the desert sands. The holy anointing oil of the Jewish sanctuary owed its wonderful

BAMBUSA—BAMBOO.

fragrance to these rasses of th Asiatic wastes. Ancient classic writers as well as the sacred penmen often mention

these fragrant plants. The sweet-scented vernal grass—Anthoxanthum—fills the air of New England with its delightful odor during the hay-making season.

Sugar-cane, the products of which are so essential to a race delighting in sweets, is a graminaceous plant, claimed by both continents, and its use antedates history, though sugar, as an article of food, has been in use in Europe but a comparatively short period. This is one of the long-lived grasses, well-kept plantations existing more than half a century.

The Dhoura, or Egyptian maize, produces a coarse grain much used by the lower classes in the Orient. This plant is the source of one of the chief grain products of Egypt, being next to wheat in importance. It fed the numberless toilers on the banks of the Nile territories before the Christian era, and the mode of its culture there is the same now as then, as is shown by the prehistoric sculptures yet remaining in that land so full of memorials of an unknown past. In some portions of Asia this plant yields three harvests in the course of the year. The cereals have been the principal food of Egypt through the historic ages.

While the alimentary properties of grasses and their products have furnished support to so great a proportion of animal life on the earth, yet one species, valueless for food, and of no special importance at the present day, for a long period of the world's history outranked all others in importance—the Papyrus Orientalis of the Nile.

Allusion has been made to the manufacture and uses of this plant in a former paper. In this place it ranks in its own distinctive family, the Graminæ, and, as such, can not be overlooked. This coarse but not ungraceful sedge grows from four to ten feet in height, with culms perhaps an inch in diameter, from the tissues of which the writing rolls of antiquity were wrought. The monumental structures and carvings on the banks of the Nile have been hardly more enduring than the records written on the papyri. They penetrate far into prehistoric times, being found in the catacombs of the Pharaohs.

The Saracenic invasion ruined the manufacture and sale of papyrus sheets, and since that period it has been lost sight of in modern inventions, and the once renowned reed has become a neglected and comparatively useless weed of the stagnant waters of the East.

We close our sketch with the *bamboo*—Bambusa—which is one of the most useful and beautiful of the tropical aborescent grasses. This grass affords to the sea-islander nearly all he needs for shelter, clothing, and weapons. He builds his huts and boats of its larger stalks, and weaves mats, nets, and cordage of its fibers. The slender branchlets form his weapons—bows, arrows, and lances.

Among the more civilized Chinese and Japanese, besides furnishing material for houses and fences, bamboo is manufactured into furniture and many useful implements, which often find their way to more enlightened lands.

Sir James Smith calls the bamboo the "Giant of the Grasses." Its culms often attain to the height of a hundred feet in a single season, and with their graceful, drooping branches, or laterals, from which depend slender willowy leaves, they form one of the loveliest and most distinguishing objects of a tropic landscape.

ANNIE E. COLE.

HOW THEY TALKED.

MY RECOLLECTIONS OF PROMINENT AMERICANS.

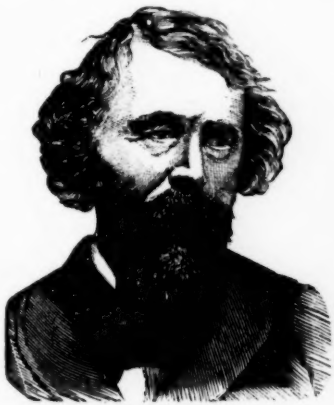
AS I sit in my library and recall the friends of other days, I think, though so many are lost to me—dear, beautiful ones, who, weary with the toil of life, turned their face to the wall, and left me to mourn for them—I am less sad and lonely than most of those who survive.

My memory is a perpetual source of enjoyment, for it unfailingly preserves all that is wholesome to be remembered and

although it is tenacious of all impressions, it has a divine faculty of winnowing the wheat from the chaff. I scarcely ever forget anything. I can recall the very words and looks of persons, and even their dress, the hour and place where a conversation occurred, as freshly and as vividly as though not a day had intervened.

Some of these friends were silent, observant, others full of a fine glow and enthusiasm. W. C. Bryant was one of the most reserved of men, but his fine eye would kindle under a happy turn of thought, and his ideas would then flow into words as aptly chosen as the language of his written poetry. I do not think he affected the conversation of women, and I have often had them wonder how I could find anything by which to sustain a colloquy with him. He never paid a direct compliment to a woman, but talked right on, just as he would talk with a man of ideas. He thus paid her understanding the best tribute. Mr. Bryant was thoroughly the gentleman in manner, listened well, was very quiet; no twisting or wriggling, which we so often see in writers of some pretension, and which is so very offensive to a person of culture. He was refined to fastidiousness; somewhat cold, rather intolerant, exact in morals, constant in friendship, and altogether a man to live long and be respectfully talked about to the last. His poetry will live, being artistic; and if not belonging to the high impassioned range, is altogether his own.

C. F. Hoffman conversed fluently and well. Though conservative in the highest sense, he had a keen admiration for a progressive idea well expressed. He recited admirably, reproducing the author's conception with the imparted interest of a finely modulated voice, and often with a penetration that carried the thought onward beyond what was apparent in the author's experience. He was animated, gay, courteous, with an electric play of fancy, pathos, tenderness, and enthusiasm. His own mind lent a grace to the thought of his colloquist, who was apt to feel that nothing was easier than to converse with famous people, till he tried it with somebody of less genius, when he learned the difference between the electric spark of the inspired man, and the dog-trot commonplace of mere talent. I remember Margaret Fuller would often look worn, weary, and revolted at the commonplace twaddle of society, and the only time I ever saw her look positively handsome was in conversation with Mr. Hoffman. Her pedantry amused him, and he knocked her theories right and left with a thorough appreciation of her intellect, and at the same time with a good-natured audacity,



N. P. Willis.

a gallant courtesy, and fine discrimination, which made his irony pleasing, and brought to the surface that humanizing love of admiration which disarmed the most ultra of women, and made her as placable as "a sucking dove."

John Neal was an excellent converser; indeed he cared very little for the opinions or predilections of those about him, but poured onward like an avalanche, indifferent to what might be bruised or uprooted in its pathway. He was terribly in earnest. The only person who reminds me of Neal is George Francis Train, both being overwhelmed with a superabundance of ideas, which they poured out, whether apt, or otherwise, to the occasion. Both were poetic, but Neal was a poet, and Train essentially prosaic; he rhymed,

but that does not constitute poetry. Both were favorites with women, for the reason that both were like women, intuitive; and though both imagined themselves to be essentially masculine, and both *were* manly, yet they never came in contact with a large-hearted woman, who did not feel a

EDGAR A. POE.

maternal instinct to protect them, while small women were afraid of them. Indeed a full woman always becomes a protector to the full man, as well as to the weak of both sexes.

Rufus W. Griswold, the compiler of American Literature, was a pleasant, gossipy man in conversation, full of whim and absurdity, as tricky as a pretty woman; never seeming in earnest, yet at heart very much so, and of fixed and tenacious opinions. If one wished to know how earnest he could be, he had only to name James Fenimore Cooper and Napoleon Buonaparte, when he would become really eloquent. Time will prove that the first is as well worth talking about as the latter, and when we shall have a generation of largely organized men and women, Cooper will grow into higher favor.

Willis was conventional, full of fancy and compliment, but not in the large sense suggestive. He belonged essentially to the artificial and luxurious. He lacked depth and comprehensiveness; took always the best he found floating on the surface of society; what was most tasteful and most artistic. I used to think he might have made more of his genius, but subsequently became convinced that it was neither large nor exacting, and that he achieved all he was capable of doing. Mr. Willis had the foolish vanity of a man of the world, who was willing to be thought a much worse or a more killing man than he really was, where women were concerned. It is to be hoped that the more enlightened views growing upon the minds of the sex will eventually disabuse the minds of men of many of these weak, ridiculous notions which were a part of the training which Mr. Willis in his youth received from such sybarites as Lady Blessington and Count D'Orsay.

Edgar A. Poe was ordinarily a reserved man, stately and self-involved, full also of a quaint suggestiveness. Always, everywhere, he seemed a person who could not be placed where he ought to be; so much so, that when his "Raven" appeared, I felt that he was there—there in that weird, solitary atmosphere. With women he was more at home; not that there was anything weak or unmanly in his appearance, but I think he had confidence in women, and trusted his best utterances to them. All poets have more or less of this feeling, but it was pre-eminent in Mr. Poe. Perhaps they all feel a mother-want. Good Mrs. Clem supplied much of this to him.

Mr. Poe, now so many years in his grave, is having a literary resurrection. It galled him to be misconstrued by the conceited clique of Boston, and the coldness of Longfellow, Emerson, and others was too much felt by him. That two men like Emerson and Longfellow, whose theories of life were in accepted channels, and not altogether original, rich men also, surrounded by cliques, should turn upon this child of imagination a cold aspect is more to be regretted than wondered at. Poe never was, for any length of time, free from pecuniary anxiety, while these men, having married rich women, never suffered from this cause. Knowing how super-

ciliously the Boston cliquers treated him, I never so much wondered at his hostility. Poe accused Longfellow of plagiarizing from me, which brought me a letter from Longfellow to explain what is unexplainable.

Orestes A. Brownson was Johnsonian. He liked a monologue better than colloquy; was humorous, philosophic, dictatorial. In talking with me he was very apt to slide into "Sir," instead of "Madam," which was not displeasing to me. His reading was simply enormous; he never forgot anything, and would surprise a listener by illustration and quotation from some out-of-the-way author, just to show that there was nothing new under the sun, and that those who plumed themselves upon saying a new or original thing, were, in reality, repeating in a poorer way what some finely-cultured mind had reached centuries before. Dogmatic as he naturally was, his humility and childlike docility in all matters pertaining to his religious belief were truly touching.

Extremes are apt to approximate. George Ripley, the apostle of Brookfarm, out of which experience Hawthorne constructed his romance of "Blithedale," a Massachusetts scholar, and very proud of his native State; and William Gilmore Simms, a South Carolina scholar, and he also proud of his native State, were very similar in the style, though greatly differing in the subject matter of their conversation. They were finished, concise, elegant. They talked in paragraphs, so well worded that every syllable might be put into a book, and it would read well there.

Mr. Ripley had no superior in the country as a critic, and the *Tribune* owes much more to his taste, judgment, and learning than is generally known to the public. His conversation was genial, full of a subtile, refined insight rarely rising to enthusiasm, and yet in character Mr. Ripley was an enthusiast of a high order; a poet in heart and expression, without the incumbrance of the art. His prose has the finish of Irving, and a great deal more of breadth and penetration. He was fond of the society of superior women, as all superior men are; and he fully sympathized with the highest aspirations of the sex.

Wm. Gilmore Simms.

These men were entirely devoid of any pretentiousness; they talked from the love of companionship and not from a love of display. They were gentlemen—truly such, in birth and culture; and where one has enjoyed the society of such men and such women, who for many years met every week and sometimes oftener, they can easily forego the vapidness of modern fashionable intercourse.

Many of the leading politicians were men not only of ideas, but of peculiar tact and appositiveness in expressing them;

indeed the training which these men undergo in the ranks of party, and by the necessities of public speaking, is nearly equal to the close logical training of the student of the law, to which must be superadded a peculiar fluency of manner, a quick repartee, and a familiarity with those tones and feelings most likely to influence human emotions.

WENDELL PHILLIPS.

Wendell Phillips is a refined and ready converser, whose ideas, in spite of the limitations of the one subject to which he devotes himself, circle largely and embrace all topics familiar to the scholar and the man of letters. His voice is singularly persuasive, and with a manner always earnest, he has the eloquence and taste of a Greek. Certainly he is no charlatan, but is entirely convinced of the justice of the opinions he holds and publicly advocates.

Thurlow Weed, so aptly called the Warwick of party, was one of the most agreeable talkers one can well meet. He traveled much, was a close observer of men and events, and his judgment rarely at fault in anticipating results; indeed, so remarkable was he in this respect that he illustrates the opinion that a cool, observant mind, an intellect unswerved by the imagination, is very nearly akin in its conclusions to the character of a prophet; what the one foresees by a divine intuition, the other also foresees by the deductions of reason.

Mr. Weed had seen and been in correspondence with most of the distinguished men of the age; had talked familiarly with crowned heads, shared in the diplomacy of courts, been intimate with dignitaries of the church, familiar with politicians at home and abroad, and acquainted with the literati of his own country and Europe. He read much, was a profound student of Shakespeare, and probably Charles Dickens had nowhere a more devoted admirer of his writings than in Thurlow Weed.

Mr. Weed's letters from abroad are models of a pure epistolary style, graphic, concise, always to the point. He had talent at such a white heat that it was equivalent to genius, and being talent it was far more available to him than the faculties of a man of genius are apt to be to the possessor of them. He was a good

listener as well as talker, always allowing his colloquist a fair chance to speak, and yet nobody was better able to cut off a bore, or to silence the insolent. He was also a splendid hater, and knew how to strike down an enemy with a telling blow.

In social life he was pre-eminently genial, considerate for others, kind to the destitute, forbearing to the erring. His deeds of benevolence were many, and some of them truly romantic, and thus this man, once the pride and the terror of party, was a most kindly and agreeable man in the home circle, abounding in anecdote, and courteous and obliging.

ELIZABETH OAKES SMITH.

KEEP THE WHEEL TURNING.

Ir ye want to get on in this big warl' o' oors,
Ye maun tread ower the nettles as weel as the floors.
Be sober an' honest, nae secrets reveal,
Hae patience—ye'll prosper by turning the wheel.

I mind my auld grannie aft telt me when young
To mind what I said—aye to guard weel my tongue.
I thocht on her words as she filled up her reel;
She lived an' was honest through turning the wheel.

There's naething like aye keeping on the alert;
We kenna how soon a chance micht come oor airt
To better oorselves, ay, and help us to speel
The steep hill o' life—ca' awa' at the wheel.

When ye've a few pounds in yer pooch, ye can say—
"Come weel or come woe, I can manage my way;"
'Tis the great po'er o' wealth that can build a heich biel—
Sae, if ye'd obtain it, keep turning the wheel.

TOM M'LAGHLAN.

INTELLECTUAL AND MORAL CULTURE.

THE history of man shows the failure of teachers in religion and morals to make men truthful and honest. This truth holds good in nations where the Bible is taken for a standard of right and wrong, as well as in those countries where the people bow at the feet of Mahomet or worship at the shrine of Buddha, or an imaginary deity. Even in Puritan New England, where the school-house and the church stand side by side, and the young have the advantages of excellent intellectual culture and the religious training, according to the Episcopal and other creeds of different Christian denominations, vice and sensuality abound; and men in high stations, both in Church and State, violate the laws of the land, and in prisons, and sometimes upon the gallows, suffer the penalty of their crimes. There is a cause for this state of morals; and we affirm that it is the result of error on the part of intellectual, moral, and religious teachers in educating and training the youthful mind.

It is affirmed by those who have the education of the race under their supervision, that the youthful minds should be educated at home by parents. This is true, but how can the young be educated at home when the parents are ignorant, and have no intellectual and moral culture? Or in countries where the public school reaches all, how are the children to be taught morality at home when both parents are violators of all the commands of the Decalogue? Furthermore, how can any instructor, private or public, teach the young the principles of honesty without a knowledge of the innate faculties of the mind to be educated? Educate the intellect and neglect conscience, and a people, like the inhabitants of New England, having learned men, great in science, theology, and law, but in numerous cases deficient in the eternal principle of

justice, is found to be the result. This is proved by the many instances of fraud by bank cashiers and persons holding positions of trust in wealthy corporations. And these defaulters, in most instances, have been educated in our public schools, and many of them have had the advantages of religious instruction in our churches by distinguished doctors of divinity. The cause of this state of things has been the wonder of the teachers of religion of the Puritan school in New England for more than two hundred years.

To the mind of a believer in phrenological truth, the cause of the prevalence of vice and crime in Christendom becomes perfectly obvious. He sees that the intellect has been cultivated while the moral powers have been left to the guidance of mere reason. Moral science has been taught in our institutions of learning, on the false principle that justice among men is the result of intellectual culture. And the expounders of the Gospel of Christ have held, generally, that morality alone is not sufficient to entitle a person to admission to the heavenly mansion; thus undervalued morality. To erroneous interpretations of Scripture and heathenish theories of mental philosophy may be ascribed the failure in great part of our public instruction to render men "a law unto themselves."

Until the discovery of Phrenology by Dr. Gall, educators had no guide to direct them in the safe road that leads the young to the temple of virtue. They were blind guides, not having the light of science to show them that conscience is an innate sentiment of the mind, and needs something more than a command to make men abstain from committing evil.

When conscience shall be recognized as a faculty of the soul to be cultivated, as has recently been denied by a distinguished educator of Massachusetts, and proper means are used to train this feeling, as we would train courage, love, fear, hope, or kindness, we may then expect the oft-disputed statement of Solomon to show itself to be true, viz.: "*Train* up a child in the way he should go, and when he is old he will not depart from it." Our schools *instruct* the intellect, and stop; they do not *train* the moral feelings. The difference between instruction and training is great. We train horses, dogs, and oxen, and they obey us. We instruct children in intellectual matters, but we fail to train them in morals, at least in the public schools. We submit, that nearly all the *training* pupils get in school is addressed to fear, ambition, or shame, through the system of "*marks*." When does a teacher appeal to conscience, the law-keeper of the human mind? When is a pupil trained to do right because it *is* right? We remember how, sixty years ago, the restless or playful child was put to shame by being seated in the middle of the room on the "dunce block," and made to wear the "fool's cap," and the whole school was permitted to laugh the delinquent to scorn. This was simply mortifying the love of Approbation through shame, while the industrious and orderly were recompensed by praise "marks," through the same faculty, Approbativeness. Sometimes Cautiousness was painfully appealed to by the whip, but conscience rarely, if ever. Hence the cunning of the child was aroused to avoid detection and consequent punishment by any trick he could invent, or any falsehood he might utter. Intellectual culture, therefore, separate from the faculty of conscience, simply qualifies men to commit crime all the more successfully. Hence we find adept thieves, bank robbers, wholesale swindlers, and the worst of libertines among men of high intellectual culture.

We come now to a remedy for the evils that afflict society from immoral practices. And it can be found by giving proper instruction to the young in a moral point of view. And this must be done in our public schools. Immoral parents will not teach their children morals, either by precept or example; and they can have but little practical instruction in goodness at the average Sabbath-school, which is open for an hour only in a week. Education in Massachusetts is compulsory —that is, all children between the ages

of five and fifteen are obliged to attend school twenty weeks in a year. Here, then, is the place to give moral instruction to the young. And it must be done by direct instruction in the moral duties through Conscientiousness, just as they are taught to cast interest by the exercise of the organ of Number, or Calculation. Text-books are needed to aid in giving this instruction; and a step in the right direction has been taken by the Woman's Christian Temperance Union in placing "The Temperance Lesson Book," which shows the bad effects of intoxicants on the body and mind, in the public schools.

We believe in moral progress, and predict the fulfillment of a day of millennial glory as the Bible teaches; and this long-expected time will be hastened by the aid of phrenological truth. Religion and science must be united; human enactments must be in accordance with the law of God, which is Truth, and then war and crime will cease among men. This day of millennial glory lies in the distant future; but the phrenologist can see its dawn, by the carrying out of the principles of this heaven-born science, with the proper training of conscience in accordance with the commands of the Decalogue. It will cause a nation of just men to be raised up who will need no civil enactments to make them yield obedience to the law of God. P. L. BUELL.

REAL MANHOOD.—Human life is full of all manner of goodness. The shell of selfishness which the struggle for existence brings to the surface, appears to the superficial observer as the real man. Man is not like the peach with its luscious exterior and its bitter pit within, but, rather, if we read him rightly, like the walnut whose shell conceals a wealth of interior goodness.

I have met but one man in whom I could find nothing but evil. Many a man is made sharp on the grindstone of poverty, and the world accounts him an aggressor; but at home, for the sake of which he struggles with the selfishness of the world, he is cherished as *lover*, *friend*, and *protector*. The world judges by the shell—the family by the nut within.

S.

TO A DEPARTED FRIEND.

I KNOW thou art gone to the house of thy rest,
Then why should my soul be so sad?
I know thou art gone where the weary are blest
And the mourner looks up and is glad.
Where Love hath put off in the land of its birth,
All the stain it hath gathered in this;
And Hope, the sweet singer that gladdened the earth,
Lies asleep on the bosom of bliss.

I know thou art gone where thy forehead is starred
With the beauty that dwelt in thy soul;
Where the light of thy loveliness can not be marred,
Nor thy heart be flung back from its goal.
I know thou hast drank of the Lethe that flows
Through a land where they do not forget;
That sheds over Memory only repose
And takes from it only regret.

In thy far-away home, wherever it be,
I believe thou hast visions of mine;
And the love that made all things a music to me
I have not yet learned to resign.

In the hush of the night, and the waste of the sea,
Or alone with the breeze of the hill,
I have ever a presence that whispers of thee,
And my spirit lies down and is still.

Mine eye must be dark that so long has been dim
Ere again it may gaze upon thine,
But my soul has revealings of thine and of thee
In many a token and sign.
I never look up with a vow to the sky,
But a light like thy beauty is there;
And I hear a low murmur like thine in reply,
When I breathe out my spirit in prayer.

And though like a mourner that sits by a tomb,
I am wrapped in a mantle of care;
Yet the grief of my bosom (oh, call it not gloom!)
Is not the black grief of despair.
By sorrow revealed as the stars are by night,
Far off a bright vision appears;
And Hope like the rainbow, a being of light,
Is born like the rainbow in tears. ANON.

LANGUAGE, No. 3.

THE DISCOVERY OF LETTERS (CONTINUED).

> Great was the genius who first designed
> How letters should express the mind.
>
> ANONYMOUS.

WHEN, or by whom, letters were discovered, we have at present no exact means of knowing. The art of writing itself is of so great antiquity, and the written annals of ancient nations so imperfect, that it is found to be extremely difficult to decide to what nation or people even, the honor of the discovery really belongs. For, as Sir Isaac Newton very justly observes: "There is the utmost uncertainty in the chronology of ancient kingdoms, arising from the vanity of each in claiming for itself the greatest antiquity, while these pretensions are favored by their having no exact account of it."

The Hebrew Scriptures are by many centuries the most ancient writings now extant, and of these, the book of Job is thought to be the first that was written. But the first mention of writing made in Scripture will be found in Exodus, 17th chapter and 14th verse: "And the Lord said unto Moses, Write this for a memorial in a book, and rehearse it in the ears of Joshua, for I will utterly put out the remembrance of Amalek from under heaven." This was immediately after the defeat of the Amalekites by the Israelites near Horeb, and before the arrival of the latter at Mount Sinai. It is observable that there is here not the least hint which might induce us to believe that there never had been any writing done in the world before then, or that writing was now heard of for the first time. On the contrary we may conclude that Moses knew very well what was meant by "writing in a book"; for he certainly would not have been commanded so to write had he been ignorant of the art of writing.

The foregoing, as well as what has been said in our last paper, fully establishes the great antiquity of the art. How the art originated has already been explained. With what nation or people it originated we shall probably be able to discover in the course of this investigation; but to what individual of that nation or people, if to a single individual—which we are inclined to doubt—the credit of the discovery is due, we can only conjecture.

Some ancient profane authors of respectability attribute the discovery of letters to the gods or to some divine man. This was the usual method among the ancients; for Plato says: "Whenever they could not unravel a difficulty, they brought down a god, as in a machine, to cut the knot." The learned Bishop of Gloucester, however, remarks that they gave nothing to the gods, of the origin of which they had any records. That is, if it were possible to account for anything in a natural way, they so accounted for it; but if that could not be done, or if the memorial of the invention or thing, whatever it might be, had been lost, then the honor was ascribed to the gods. The gods then seized upon the property by that kind of right which gives estrays to the lord of the manor. Some writers, too, of modern times think that letters could not have been the invention of man, but that they must have been the gift of God. Thus, the Rev. Thomas Scott, D.D., author of a commentary on the Bible, in the preface to his work expresses the opinion that the art of writing was communicated by divine revelation to Moses in order to perpetuate with certainty those facts, decrees, and laws which he was deputed to deliver to Israel.

Tradition has ascribed the discovery of letters to Cadmus the Phœnician; but the account of the transaction contains so much that is purely mythical, that the whole story is now generally regarded as a fable. The tradition is discredited by the best informed writers on the subject.

But though the claims of Cadmus individually can not be allowed, it is still generally supposed that alphabetic writing originated with his countrymen.

> Phœnicians first, if ancient fame be true,
> The sacred mystery of letters knew;
> They first, by sound, in various lines designed,
> Expres't the meaning of the thinking mind;
> The power of words by figures rude conveyed,
> And science everlasting made.
> —*Rowe's "Lucan," B. iii., L.* 334.

Some Roman authors attribute the discovery to the Phœnicians, among whom are Eusebius and Pliny, the latter of whom says: "These Phœnicians were much celebrated for the invention of letters, astronomy, navigation, and the liberal arts." From this we learn that other arts and sciences were attributed to them, as was also great skill in architecture and manufactures. Their fine linen and glass were said to be superior to those of any other nation. In fact the discovery of glass has always been attributed to them. And whatever was great, elegant, or pleasing, whether in building, apparel, or in coloring, it was customary to distinguish by the epithet "Tyrian" or "Sidonian," these being the chief cities of Phœnicia. "Tyrian purple" is a household word even to this day, although its manufacture ceased to exist centuries ago, and the secret of it has long been lost.

The Phœnician too was the commercial man of the olden time: he was the first to go down to the sea in ships. Now a people who were architects and manufacturers must, as a matter of course, have understood mechanics; and a people who understood and pursued navigation, could not fail to be acquainted with geography and astronomy; and a merchant could not be ignorant of arithmetic, and above all of writing, which is essential to all the rest. So upon the whole, the Phœnicians seem to have more to sustain their claims to the honor of the discovery of letters than any other people; not only in their greater advancement in the arts and sciences, but in a higher degree of civilization generally.

Among those who have disputed the claims of the Phœnicians to the honor of having discovered letters, the Egyptians seem to have done so with better prospects of success than any others. Their title to this distinction, however, seems to be based rather upon the more remote antiquity which they claim for themselves than upon any greater degree of civilization. Yet the Egyptians might possibly have had something to do with the discovery. An alphabet of syllables at least might have existed, perhaps did exist in Egypt prior to the discovery of an alphabet of letters. The first character in the alphabetic scheme, as we have seen, had its origin there; but whether it was ever employed by the Egyptians as such is more than we are now able to determine. Whatever claims of this kind they may have, and they are considerable, still it is in Phœnicia that we first meet, with any degree of certainty, with a regular alphabet.

As has been previously remarked, the most ancient written language in the world is the Hebrew, of which the Phœnician, Samaritan, and Chaldee are allowed to be dialects. These are called by Dr. Webster the Semitic languages; as they were the languages and dialects used by the descendants of Shem, the progenitor of the Israelites. Although the Phœnician alphabet does not entirely correspond with the Samaritan, there is great similarity between them. The first five books of the Old Testament, commonly called the Pentateuch, are supposed to have been written originally in the Samaritan character, or in one very similar to that. They have come down to us, however, in the Chaldee, a character which is said to have originated with Ezra the scribe when he wrote out a new copy of the law after the rebuilding of the temple.

Every character in the Hebrew alphabet, besides its function as a representative of a given sound, has a meaning; two meanings in fact, a literal meaning and a symbolical meaning. A, or its equivalent, called *Aleph* in Hebrew, of which the history has already been given,

has a literal meaning in that tongue very similar to that given to it by the Egyptians; in the one case an ox, and in the other, Apis, the bull. Its symbolical meaning is precisely the same in both instances, namely, a leader. This proves its identity, and it also goes to show that this character did duty previously in an alphabet of syllables, and most likely too before that in an alphabet of words. The letters of the Hebrew alphabet stand also for numbers, as do the Roman characters, as may be seen in the 119th Psalm.

The most that the advocates of the Cadmean theory claim for their protégé is the invention of sixteen letters, about two-thirds of the whole number composing the different alphabets. These are equivalent to the following letters of the Roman alphabet, the one which we use: A, B, D, E, F, G, I, K, L, M, N, O, P, R, S, and T. Some authorities aver that four letters were added to these by one Palamedes, and four more by Simonides, Greeks both of them. Others again say that the alphabet of the Phœnicians contained twenty-two letters when it came to the Greeks; and we know that the Hebrew of which the Phœnician was a dialect as stated, contains that number; and that the Greeks added two characters. That the Greeks did make additions to the Phœnician alphabet to this extent at least, is certain, for their alphabet contains twenty-four letters.

The Greeks also rounded the forms of the letters. Their letters are consequently found to be somewhat less angular than those of the Hebrew alphabet. As their names for the first two characters in the scheme were *Alpha*, *Beta*; the term *Alphabet* has descended to modern times as the name of any collection of symbols representing the elementary sounds of speech.

In the first paper of this series, that on the origin of speech, it is remarked that the different spoken languages would always be found to accord with the varying national characteristics of the people speaking them. This principle holds good to some extent also in written language as well. And why not? If the character of individuals is discoverable in their handwriting, as it is said to be, why not national characteristics also? We think that we can discover some evidence of this principle in the effort of the Greeks to round the characters of the alphabet, and thus produce more graceful forms. For, according to Hogarth, the curved line is the line of beauty. In the fine-arts, in the department of sculpture, the Greeks were at one time the acknowledged masters, as have been the Italians in the department of music. In the more graceful characters of the Greek alphabet we may recognize an appreciation of beauty in form, the same as we perceive an appreciation of musical sounds in Italian speech.

The Romans adopted the Greek characters—at least they derived from them their capital letters; their small letters were made among themselves, about the year 700 of the Christian Era. This alphabet was considerably changed and improved before it became that series of symbols which we now use under the name of Roman letters. Finally, upon the downfall of the Roman Empire and the return to their native wilds of the Northern hordes of barbarians who had taken part in the conquest, along with other spoils, they carried away with them also Roman letters, and applied these as best they might to the representation of spoken tongues which differed greatly from the Latin, and to the representation of which they were not well adapted. Some few of these Northern tribes, it is true, refused to adopt the Roman characters, continuing to use the alphabets of their own, to which they had been accustomed. These latter are those mostly who speak the Sclavonic dialects. They form, however, exceptions to the general rule.

Some of the different varieties of letters now in common use are due to the invention of the art of printing. It was found advisable to employ in printing, letters which were more compact, and which should occupy less space than those

ordinarily used in writing. This branch of the subject will be treated of more at length in a subsequent paper on the invention of printing, where it more properly belongs.

When men first began to write, the order of writing was from the right hand toward the left. Afterward they wrote from right to left and from left to right alternately, commencing every line after the first immediately underneath the finished end of the preceding line. This method was in vogue up to the time of Solon, the celebrated lawgiver of Athens. The inscription on the famous Sigean monument is an example of this mode of writing. The motion of the hand in writing from left to right, however, was found by experience to be by all odds the best, at once the most natural and the most convenient, and this was the method eventually adopted by all the nations of Europe. Some Asiatics, however, as the Chinese, write from top to bottom of the sheet or page. But as their characters stand for things, and not for the sounds of vocal utterance, having in them nothing of the phonetic principle, it makes not so much difference as to the order in which they are placed, as each character is a word complete in itself.

Writing was first done on tables of stone, sometimes on stone pillars. The Ten Commandments, we are told, were first written on tables of stone. Afterward plates made of some soft metal were used. The writing on these was done with an iron *stylus*, the process resembling somewhat the engraving of modern times. In some countries they wrote on tablets of wood upon which had been spread a thin coating of beeswax. An iron *stylus* was used here also, sharpened at one end to a point, and flattened at the other, in order that when a mistake had been made, the writer could, with the flattened end of his *stylus*, obliterate the impression by smoothing over the wax, and so begin again. As writing became more common, the inner bark of a certain kind of reed found in Egypt, and called *papyrus*, was made use of.

About this time pens and ink began to come into use. Pens were first made, at least in Egypt, from reeds, cut down to a point and split, exactly like those since made from quills. The pen was afterward made from a feather or quill. The English word "pen" is derived from the Latin *penna*, meaning a feather. Parchment, made from the untanned skins of sheep and goats, and a finer kind called *vellum*, made from the skins of very young or aborted calves, was invented previously to the Christian Era, though its use had not become general in Europe until the beginning of the eighth century. It has been almost wholly superseded by paper, which was an invention of the fourteenth century. Metallic pens, too, have for the most part superseded quills.

We have thus endeavored to give briefly a succinct history of the art of writing, from its earliest inception, from the first rude attempts that were made, the hieroglyphs of the Egyptians; tracing it through all of its various stages, down to the introduction of the phonetic principle, when the written characters were first made to stand, not for things, as heretofore, but for words, words representing the sounds of speech; which, as we have seen, effected a complete revolution in the methods of chirographical representation. Writing now became, and continued to be, a science, as well as an art, the science of written language. We then traced it from an alphabet of words to an alphabet of syllables, finally ending in an alphabet of letters; which, after making such modifications, alterations, and additions as seemed to be necessary in each particular case, was in time adopted by nearly every nation or people having a written language.

The discovery of letters, in its wide and far-reaching results, was the most important event that had happened in the history of the world up to the period at which the discovery was achieved; an event without which very little farther progress could have been made. Although other discoveries and inventions made subsequently, as, for example, the

invention of printing, may have done more for the spread of general intelligence and the advancement of the race toward a higher civilization; and others again, as the invention of the steam-engine, may have added more to its material prosperity; still it is questionable whether without the previous discovery of letters, these later inventions could have been accomplished. Certainly, without letters there would have been no call for the printing-press. As it is, the discovery of letters was rendered a thousand times more effective for the achievement of all ends within the scope of written language by the invention of printing. As this last is included in our definition of written language, the history of its invention will be given in our next paper.

JAMES COULTER LAYARD.

THE AINOS AS THEY ARE

THIS tribe of people has excited some attention in scientific circles on account of certain peculiarities of organization. Some writers have ventured the notion that in them is to be found a link which carries the human a degree lower toward the brute organization. Recently, however, an English lady who has seen the Ainos at home, published a book* in which she relates her impressions; saying among other things:

"After the yellow skins, the stiff horse-hair, the feeble eyelids, the elongated eyes, the sloping eyebrows, the flat noses, the sunken chests, the Mongolian features, the puny physique, the shaky walk of the men, the restricted totter of the women, and the general impression of degeneracy conveyed by the appearance of the Japanese, the Ainos make a very singular impression. All but two or three that I have seen are the most ferocious-looking of savages, with a physique vigorous enough for carrying out the most ferocious intentions; but as soon as they speak the countenance brightens into a smile as gentle as that of a woman, something which can never be forgotten. The men are about the middle height, broad-chested, broad-shouldered, 'thick-set,' very strongly built, the arms and legs short, thick, and muscular, the hands and feet large. The bodies, and specially the limbs, of many are covered with short bristly hair. I have seen two boys whose backs are covered with fur as fine and soft as that of a cat. The heads and faces are very striking. The foreheads are very high, broad, and prominent, and at first sight give one the impression of an unusual capacity for intellectual development; the ears are small and set low; the noses are straight, but short, and broad at the nostrils; the mouths are wide, but well formed; and the lips rarely show a tendency to fullness.

"The 'ferocious savagery' of the appearance of the men is produced by a profusion of thick soft black hair, divided in the middle, and falling in heavy masses nearly to the shoulders. Out of doors it is kept from falling over the face by a fillet round the brow. The beards are equally profuse, quite magnificent, and generally wavy, and in the case of the old men they give a truly patriarchal and venerable aspect, in spite of the yellow tinge produced by smoke and want of cleanliness. The savage look produced by the masses of hair and beard, and the thick eyebrows, is mitigated by the softness in the dreamy brown eyes, and is altogether obliterated by the exceeding sweetness of the smile, which belongs in greater or less degree to all the rougher sex.

"The height of the adult men ranges from 5 feet 4 inches to 5 feet 6½ inches. The circumference of the heads averages 22.1 inches, and the arc, from ear to ear, 13 inches. According to Mr. Davies the average weight of the Aino adult mascu-

* "Unbeaten Tracks in Japan." By Isabella L. Bird.

line brain, ascertained by measurement of Aino skulls, is 45.90 ounces avoirdupois, a brain weight said to exceed that of all the races, Hindoo and Mussulman, on the Indian plains, and that of the aboriginal races of India and Ceylon, and is only paralleled by that of the races of the Himalayas, the Siamese, the Chinese and Burmese. Mr. Davies says, further, that it exceeds the mean brain weight of Asiatic races in general. Yet with all this the Ainos are a stupid people!"

The coast Ainos, Miss Bird tells us, she found to have more hair on their bodies than those in the interior, and in some other respects differed in appearance, a difference probably to be accounted for by their mode of life and their surroundings. The Aino garments are often exceedingly handsome, being decorated with "geometrical" patterns, in which the Greek fret takes part, in coarse blue cotton, braided most dexterously with scarlet and white thread. The modesty of the women is very remarkable, sometimes almost excessive even to European notions; nor do they seem to be the unmitigated drudges that most savage women are. The great hero of the Ainos is Yoshitsune, who is also the most popular hero of Japanese history; the Ainos worship him, and Miss Bird was permitted to visit his shrine on a hill near Biratori, the Aino village at which she spent most of her time.

CHAINS—AN OBJECT-LESSON.

[From a lecture delivered by Professor L. N. Fowler to a London audience, the following notes were taken. The comparisons drawn between the parts of a chain and the phases and progress of an ordinary human life are original and striking.]

THE chain of life is divided by seven. The first seven years we are learning to live, walk, talk, and read; if a child lives till it is seven, there is some chance of its living longer. If it lives till it is fourteen, it has been taking in stock to make the links, and preparing to learn the lesson of life. If he lives till he is twenty-one, he should have learned the lesson of life, and be ready to go to work. If he lives till he is twenty-eight, he should have learned to govern himself, to love, found his mate, and settled in life. If he lives till he is thirty-five, he should have begun to make the links, and get his position in society. If he lives till he is forty-two, he should have got all his forces in full operation, have laid all his foundations, and commenced his work in earnest. If he lives till he is forty-nine, he should have done his greatest day's work, made his best and largest links, have thoroughly learned the lesson of life, and so accumulated as to be beyond want. Seven times seven brings us to the meridian of our mental and physical vigor, strength, and activity.

If he lives till he is fifty-six, he should have become well acquainted with the design of his existence, the value of human nature, and learned how to act with success on the minds of others.

As a chain may be strong or weak, long or short, made of good and bad links, get rusty, lost, or broken, used for a good or bad purpose—so may be the chain of life.

As a chain may be rough or smooth, bright and dark in spots, and wear most in spots—so in the chain of life.

As a chain may be joined, welded by heat, so two lives may be joined and blended by love—the magnet will attract and hold together; a little magnet draws and holds but little.

As the chain is perfect in proportion to the perfection of each link and the union with its fellow—so the chain of life is perfect in proportion to the perfection of each mental power and its action with all other mental powers.

As chains become mixed up, become snarled, the links deranged, and twisted out of place—so in the chain of life in business, courtship, marriage, and health, matters get crooked, mixed up, and in confusion.

Swivels are necessary to let the twist out of a chain when the log rolls; it is composed of two parts, the one working within the other, and no chain is perfect without a swivel. Twists and snarls in the chain of life are produced by gambling, idleness, bad planning and circumstances, too hard work, intemperance; and a mental swivel, made up of Causality, Constructiveness, and Conscientiousness is needed to get the kinks and snarls out.

One chain is a thousand times more useful than another—one holds a watch, another a furious beast, and a third holds a ship with a precious cargo and many hundred lives—so in life. Some lives are very responsible and do the most important work involving the well-being of thousands. One anchor chain will make many thousand small chains. As a violent jerk on a chain would break it, when the same amount of strain applied steadily would not break it, so a sudden shock to the mind or a violent strain on the constitution would snap both, etc.

Chains made of jet are very tender and brittle, but will receive a high polish, are made to shine, and are more worn for ornaments than for use; so many receive a high educational polish, are mere ornaments in society, and are remarkably brittle and tender in the rough paths of life.

Some chains are not what they appear to be—for they are glazed, painted, or plated—so in the chain of life many externally are better or worse than they ap-

pear to be. It is not every one who can bear a close examination.

Strings will tie together the broken links, *but* they will break. Toggles are the best for the purpose, although inconvenient and bungling. Imperfect actions, perverted appetites, broken limbs, unwise marriages, and a bad reputation, are very inconvenient, and require much toggling. The lives of some are more toggle than chain.

It takes time and many appliances to bring some chains to their bearings, but they do a mighty work when once in their place, for they hold a powerful and costly ship in a fierce gale. So in life, it takes great occasions and powerful influences for some men to take a certain direction, but when it is taken they carry everything they take hold of. For instance, Wilberforce, Lincoln, Oliver Cromwell, Alfred the Great, and many others.

The dog-chain is used to keep the unruly animal in a safe place. So the lives of some men are like this chain to keep the dangerous and criminal class in their place.

As the watch-chain is very handy—light, neat, available, useful, and serves a good purpose—so many lives are made very handy, useful, and available for good purposes by their high tone, refined spirit, and willing, sympathetic disposition.

A safety chain is of secondary use in securing an article more valuable than itself. So some lives are spent in looking after some other lives more important.

Ornamental chains show how expensive and artificial a life can be made, and at the same time of how little use they are to society.

As many chains are made to do very dirty work and left to rust for want of care, so many a life is spent in doing the hardest and dirtiest kind of work with poor pay and no thanks.

Some chains of life are made up of broken promises, flirtations, following the fashions, failures in business, etc. While others are continually doing good, setting good examples, reforming and educating others.

A chain with all its hooks, links, swivels, and rings is not made all at once; every part has to be made separately, and then put together piece to piece. So it takes a whole life to make a life chain; every day adds a link until the end comes.

Let us examine our life chain as we go along.

NEWSPAPER GOSSIP.

EVERYTHING that does not tend to elevate our purity as a people depreciates it. Nothing earthly is immutable or unimpressible. Change is God's initial permit, and to it, unfortunately for the most of us, was added the choice of change. Evil should not be a temptation to the Christian, yet its coils are ever dangerous to our plastic developing youth, and wearing, rather than strengthening, to the resisting powers of maturity. Endurance is a virtue and silence golden, but blessed likewise is the full power of speech. These maxims require much judgment in application.

Fault-finding may be rather chronic with Americans. The exercise of it to the pleasure or even perfect satisfaction of the party directly concerned is one of the most unattainable graces. I have vainly sought for the grace to express disapproval of what seems to me wrong with a delicacy that could be recognized more fully as the hearty approval of good. In lack of desired favor, I say sorrowfully how I dislike the gossip of city dailies and all other publications that stoop to the common minutiæ of community scandal, drunken broils, default of manner and principle. Though the parasite of ill is continually gnawing at the vitals of society, it is not a morally delectable dish to be served hourly, even though it be prepared in every conceivable style,

from a whole roast to an imperceptibly flavored broth. We are fashioned by what we consume mentally as fully as physically, and quite as liable to acquire perverted tastes. This is why the keepers of mental restaurants—the editors and conductors of the press—should be conscience-bound to furnish their patrons healthful and unadulterated food. I doubt if any of these well-disposed and often highly gifted proprietors desire to offer what is unsound, yet the moral connoisseur grows faint with the odor of dishes daily pushed to the front. Those flavored with the aromatic spice of wit are the most acceptable, but as second-rate burnt almonds, they leave one's mouth smarting by the deceptive peach-kernel. Others appear to have no other conceivable object than to swell the bill of fare to the fullest record of the latest law and love-breaker.

"We serve what our customers consume most freely; prepare most of what sells best; simply bow to the demand for excitement," echo the experienced. This is true just as in other departments of business, yet there is a higher law of trade—a reward beyond that of moneyed patronage.

God has given us a short lease on life. The greater responsibility of position we assume during that time, the greater accordingly must be our accountability. The privilege of satisfying the mental need of developing souls, of arranging our thoughts and those of others, that they may form a part of the living present, is grand and glorious—too precious to be misused. We should watch well what we gather and scatter again, lest the world be none the better for our presence, and we be reckoned *unfaithful* servants.

S. L. OBERHOLTZER.

PRINCE GORTSCHAKOFF.

ONE of the three or four great minds that have exerted a paramount influence in the affairs of Europe for thirty years or more, belonged to Alexander Michaelowitch Gortschakoff, late Chancellor of Russia, who died on the 11th of March, at Baden. What Bismarck is to Germany, Prince Gortschakoff was for many years to Russia, and hence that vastly spread-out empire owes her position before the world to-day, more to him than to any other man.

He was born July 16, 1798, and received his education at the Lyceum of Zarskoe-Setlo, founded by Catherine II. There his course was very brilliant, and after leaving the place he continued to study. Certain contributions of his to current literature attracted the attention of the then Russian Minister of Foreign Affairs, who forthwith took him into the Foreign Office. Then he was only twenty-five years of age, and was sent as attaché to important legations, appearing at the Congresses of Laybach and Vienna as a member of the suite of M. de Nesselrode, the famous diplomatist. In 1824 he was Secretary of the Russian Legation in London, and afterward filled the positions, consecutively, of Russian Chargé d'Affaires at Florence, member of the Russian Legation at Vienna, and Ambassador Extraordinary at Stuttgart. He was made a Privy Councillor and was raised to the rank of Lieutenant-General by the Emperor Nicholas.

He was chief in authority in behalf of Russia at the negotiations which took place at Vienna immediately preceding the outbreak of the Crimean war. Then he was one of the two Russian plenipotentiaries at the Conference at Vienna in March, 1855, after the Emperor Nicholas' death, and where he displayed great tact and ability in maintaining the rights of Russia, but was ultimately obliged, though most reluctantly, to acquiesce in a restriction of Russia's naval power and military operations on the Black Sea. After the terms of peace were definitely adjusted and the Treaty of Paris was signed in April, 1856, Gortschakoff was appointed

Minister of Foreign Affairs in place of Count Nesselrode, who had retired.

In 1860, in consequence of events occurring at Naples, Gortschakoff addressed his celebrated circular to the Powers of Europe, urging upon France and England their own principle of the independence of nations, and protesting against the interference of western powers with the internal policy of the Two Sicilies. In 1863 the Emperor, who had made him Vice-Chancellor in 1862, promoted him to the office of Chancellor of the Empire. In 1866 he succeeded in bringing about the separation of the Roman Catholic clergy of Poland from the Holy See.

It was by the efforts of Gortschakoff that a change was brought about in the policy of the Russian Government, the substitution of mild and judicial measures of control for the old military despotism. He busied himself chiefly with internal reforms, one of which, the emancipation of the serfs, he carried out in so prudent a manner that it produced no turbulence of a serious nature. In 1871 he succeeded in obtaining from the great Western States a revision of the Treaty of Paris, to certain conditions of which regarding the Black Sea he had given such a reluctant consent. The demand for this revision created great excitement

in Europe, but, with great tact and ability, Gortschakoff ultimately carried his point.

The Russo-Turkish war, consequent upon the insurrection in Bosnia and Herzegovina, the Bulgarian massacres, and the Turco-Servian war, again brought Russia and Gortschakoff prominently before the world a few years ago. A general European war was expected to result from the complications of the time, and it was greatly due to Gortschakoff that this calamity was averted. He accompanied the Emperor to the front, and there closely watched the interests, sympathies, and tendencies of all parties, and acted accordingly. On peace being concluded he gave ample evidence in his reply to the Circular of Great Britain on the San Stephano Treaty that he had through age lost none of his great ability as a diplomatist.

On his retirement last year the Emperor testified by a special rescript to the character of his services, in which he acknowledged "the glorious and splendid services which had gained for him the respect and gratitude of his countrymen, and had graven his name indelibly on the pages of Russian history."

Unlike certain other great leaders of state in Europe, Prince Gortschakoff warmly favored the Union cause during the late war, and witnessed to his sentiment in a circular, by these memorable words: "The North American Republic not only presents itself to us as an indispensable element of the international balance of power, but, besides that, it is a nation toward which our most august Emperor and the whole of Russia have always had a most friendly disposition, because both countries are in the ascendant period of their development, and seem called to a natural unity of interests and sympathies, proofs of which have already been given on both sides."

The portrait exhibits a type of physiology and mentality more like the Teuton than the Sclav. It is robust and powerful in every respect; the great breadth of the head at once impresses us with the natural endowment of the man in executive stimulus, and in capabilities of organizing, planning, and arranging. The intellectual faculties were specially developed in the domain of reflection, and possessed uncommon strength and breadth of application. Intellect in this case was closely allied with the faculties of the middle and lower side-head, and therefore was thoroughly practical in its reasonings. Expediency, fitness, utility were among its cardinal principles. We do not see in the features much expression of harshness or severity, but rather a kindly, considerate tone, intimating the influence of strong Benevolence, and the effect of a well-developed social nature. Here was a man of solid convictions, and of resolute, determined action, but one who viewed his purposes on all sides, gathered suggestion and counsel from incidental circumstances, quickly formulated his plans and could as quickly modify them in application; was circumspect, politic, reticent, shrewd, yet urbane, kindly, mellow, and gentle.

SCOLDING ACCOUNTED FOR.

SOME years ago it was my fortune or misfortune to be associated in the intimacy of family life with a very influential and interesting woman. She possessed rare executive ability, and could "turn off" more work in a given time than any other woman I ever saw. Her husband was a clergyman, but his wife's power over a congregation was far greater than his, and her influence in the parish over which he was installed, was fully equal to if not greater than his. The larger the occasion, the higher she rose to meet it, and she was never so utterly easy and at home as when the greatest demands were made on her powers of self-possession, of

fine utterance and of administrative ability. In public assemblies she was captivating; in society, polished and agreeable; but at home she was often the dreadful opposite of all this. She would scold, scold, scold, from morning till night. Her husband was one of the sweetest saints the Lord ever made; but he couldn't please her, and every member of her family in turn experienced the fearful lashings of her tongue. All the time she was intensely religious, always ready for prayer-meeting and devotional exercises of whatever sort, always justifying her motives as being, as no doubt they in fact were, of the very best.

She had a large family, and an income both small and irregular; her husband was a "poor manager," as the phrase is, and always behindhand and in debt, and she, poor woman, tried out of her superabundant energy and vitality to make up deficiencies at every point where they occurred.

It is interesting to me now to recall her manner when she marshaled her forces and started into a piece of work. Every person in the household was laid under contribution and was compelled to contribute to the grand result in some form, by helping directly or by keeping out of the way. When the work began, the scolding began, and the harder the work was pushed the harder the scolding went on.

Years after this experience I became a student of Phrenology, and then I was able to explain to my entire satisfaction why this good woman could be so good, so religious, so consciously devout, and yet at home so utterly disagreeable and intolerably odious. The two organs of Combativeness and Destructiveness in her must have been very large. When she had her executive ability lashed into fury by the stimulus of a big job on hand, the blood in her brain was drawn specially to these organs, first to Combativeness and sympathetically to the contiguous organ, Destructiveness, and so the scolding was entirely accounted for without damaging her Christian character in the least. She was not an introvertive woman save in emotional matters of a purely religious sort, and she was not a bit philosophical. If one ventured to expostulate with her and point out the unwisdom of her course, her invariable rejoinder was that "God knew her heart; He knew her motives were pure."

The value of Phrenology to one who would develop within himself a harmonious and well-balanced character is incalculable. The calling one's attention to one's own excellences or defects is the first step toward a better understanding of what must be done to round out and perfect the character. When we can see ourselves as others see us, or what amounts to almost the same thing, see ourselves as we see others, we are in a way to remove and overcome defects and cultivate those qualities we would improve and those in which we are wanting.

L. S.

MORNING AIR.—"What is the pill that will keep us well, serene, contented? Not my or thy great-grandfather's, but our great-grandmother Nature's universal, vegetable, botanic medicines by which she has kept herself young always, outlived so many old Pans in her day, and fed her health with their decaying fatness. For my panacea, instead of one of those quack vials of a mixture dipped from Acheron and the Dead Sea, which came out of those long, shallow, black, schooner-looking wagons which we sometimes see made to carry bottles, let me have a draught of undiluted morning air! If men will not drink of this at the fountain-head of the day, why, then, we must even bottle up some and sell it in the shops for the benefit of those who have lost their subscription ticket to morning time in this world. But remember, it will not keep quite till noonday even in the coolest cellar, but will drive out the stopples long ere that, and follow westward the steps of Aurora."—H. D. THOREAU.

CRANIOLOGY OF INEBRIATES.

DR. J. S. WRIGHT, professor of surgery in the Long Island College Hospital, of Brooklyn, N. Y., has lately made some original studies of the heads of inebriates, comparing them in size and special developments with those of epileptics and others. The following is a *résumé* of his conclusions:

He assumes that any organ which has notably deviated in conformation and volume, has also deviated in function. That the brain may deviate from the standard of conformation and volume. That any organ of the body has in health a fixed, though variable conformation and volume; and a constant, though variable function. The first question to be solved was this: Does the confirmed inebriate have an abnormal conformation of the brain? In answer the heads of thirty-five confirmed inebriates, inmates of the inebriates' home at Fort Hamilton, N. Y., were measured and compared with similar measurements of thirty-five uneducated men. The average weight of the inebriates was found to be less, owing to the derangement of nutrition and general health, but the average height was greater. The head of the confirmed inebriate had a greater circumference than the head of the uneducated man, but this measurement can not be depended upon as an index of the volume of the contained brain. The conclusions were, namely:

1. The uneducated man has a greater volume of brain in the anterior part of the cranial cavity than the confirmed inebriate; also a greater volume in the posterior part of the cranial cavity.

2. The confirmed inebriate has a greater volume of brain in the middle part of the cranial cavity than the educated man; also in the middle region of the head the vertical diameter of the inebriate is greater.

Hence it appears that the brain of the inebriate is a deviation of both organism and function. In the majority of cases the conformation and the volume of the brain are attained by the time the individual is twenty-five years of age; hence the inebriety may not be the cause of the deviation in conformation and volume of the brain of the confirmed inebriate. The causes must operate previous to this date. They must occur during the early life of the individual, or they must be hereditary. In many cases these causes are inadequate to produce the deviations in volume and conformation found in the brain of a confirmed inebriate, hence it is concluded that they are mainly hereditary. It is also thought that the brain of the confirmed inebriate is a poorer order of development than the normal brain.

It follows then that these deviations of the brains of confirmed inebriates are properly to be treated as diseased conditions, and that a confirmed inebriate must be treated as a sick man.

In the study of the question, do epileptics have an abnormal conformation and volume of brain, a large number of cases were examined. The result reached was that the brain in incurable epileptics is a deviation both in structure and function. The outset of the disease is generally hereditary. Given this outset, manifested in the conformation of the brain, we have a basis for the development of epilepsy, or inebriety. Looking upon certain individuals as having heads deviating from the standard of volume and conformation, and finding that they are not adjusted to the conditions in which they live, and that they exhibit abnormal functional manifestations, and seeing that the influences of disease and injury augment their deviations, in a given case of injury or disease we may have in the brain itself an important indication as to what the clinical history may be not only immediately, but during the rest of the life of the individual. Dr. Wright notes also that the average criminal exhibits a deviation from normality; and concludes that the brains of inebriates and epileptics vary but little, and with slight changes would readily run into each other. The modified brain found in the epileptic often has descended from the altered brain of an inebriate.

FAT AS DISEASE.

IN the March PHRENOLOGICAL JOURNAL, p. 164, Mr. Todd gives his impressions as to the wholesomeness of fat, and "takes issue, absolutely and positively," with the statements of a number of distinguished physiologists who have pronounced against the accumulation of fatty matters in the cellular tissues and throughout the substance of the muscles and organs, calling it a state of disease, pure and simple. For upward of five years past I have made the study of this disease—fatty degeneration—a specialty, my attention being particularly called in this direction from noting its relation to the enormous death-rate of infants, a class which should, from Mr. Todd's point of view, be almost exempt from sickness; certainly, with rare exceptions, they are as fat as the hogs of which he speaks, that are "covered with a layer of pure (!) adipose tissue, three to six inches thick," which he terms a "healthy secretion." Mr. Todd speaks with pride of having learned more by his "mistakes and blunders than by direct effort." I hope he has not committed the mistake of permitting himself to become fat, for he may find at last that his knowledge about the true nature of fat has come too late. Hogs and cattle being fattened for the market, die in whole droves of a *filth* disease—typhoid-pneumonia. The only *healthy* hogs in existence are the wild ones, that are as lean as greyhounds, and try the mettle of the swiftest hunting horses. Compare these animals, living as they do to advanced age unless overwhelmed by a body of hunters, with the obese creatures that are fed to fill lard tierces, tubs, and pails for "domestic economy!" that is, largely for the benefit of the doctors. Not one of all the millions of hogs butchered has even an approximately sound liver or kidney; in fact, he has not a sound organ or tissue in his body. The same is true of the stall-fed ox. And this leads me to reply to the question, "If that fat [speaking of the hibernating animals] had been 'disease,' would it support animal life?" Fat is not disease in the sense of corruption, but rather exhibits the effort of nature to prevent temporarily acute disease by storing up in the *cellular tissues* the indigestible and non-assimilable excess in diet. In *health* these tissues subserve an entirely different purpose; in *disease*, the disease under consideration, they are stuffed out and form the "adipose tissues," as they are popularly called. This is one of Nature's methods for prolonging life under adverse circumstances, substituting a chronic disease for an acute one.

Again, the good missionaries tell us of the Chaumars, who for centuries have lived largely on the flesh of animals dying of the plague. That is, whenever the cattle-distemper rages, perhaps taking whole herds, the Chaumars, who form a low class,

though a very populous one, are given the carcasses for food; in fact, according to the custom, if not the law of the country, it belongs to them of right. And yet we are told that they are as healthy as the rich meat-eaters of that country who subsist on the fat cattle killed before the disease has developed beyond the need of any aid from the butcher! If the Chaumars can subsist on putrid flesh, I see no reason why the bear may not live on his own carcass, even if we agree that it is not strictly a healthy one. We know, of course, that he does so live; and that during the entire winter he serves us for an example of the "fasting cure"! I could name hundreds of eminent fat men who have died in this and other countries, whose lives would have been spared for many years, had they "hibernated" until they came out "lean, lank, and emaciated," provided they had then begun a more wholesome way of living, and had thenceforth kept themselves in *condition*. Leon Gambetta, whom M. Rochefort called "the fatted satrap," died from the effects of a slight wound from which a *clean* man would have readily recovered. Gustave Doré, the great French artist, died of putrid sore throat, a disorder which can never "attack" a person except the predisposition exists. Fat hogs die by thousands of this same disease. Doré was a man of "moods," at times gloomy and saturnine, no comfort to himself nor any one else; again, the light and life of a loving circle of friends, who had become "weather wise," knowing when to approach him and when to keep at a safe distance—this constituted one of the symptoms of his disease. We have in this country, in our halls of Congress, scores of men liable at any moment to be stricken down because of this disease. These subjects do not all die young, like Gambetta; there is a "tough vein" running through some which keeps them along for a good many years, but they would live *better* and *longer* lives if they would take measures to rid themselves of this disease. Here and there an observing agriculturist or the editor of an agricultural journal has learned that, if not disease, fat *predisposes* to disease. It is abnormal; and, therefore, strictly speaking, disease. In reply to a query as to the cause of "black leg" in cattle, the editor of the *Live Stock Journal*, classing it as one of the zymotic diseases, and one of the most fatal, says, "It usually attacks young cattle that have suddenly *put on fat*," and he cautions his readers against over-feeding their stock. No, fat can not be justly called "diseased flesh," for it is *not* flesh; the *muscles* are flesh. It can not be called "a mass of scrofula" until the creature who bears it is overborne by it; then it speedily becomes a mass of corruption. In conclusion, I will invite all persons to make some "direct effort" to study up this matter for themselves, and ascertain whether it is not "an egregious error to speak or write of fat" as a "healthy secretion," when it is a question of what we term *fat* cattle, *fat* hogs, *fat* babies, or *fat* men and women.

C. E. PAGE.

Biddeford, Me.

DOCTORING AMONG THE MINERS.

A CONTRIBUTOR to the Detroit *Free Press* thus describes the way sick men were treated in the pioneer days of gold mining:

"As to medicines, our mainstay was a hot sweat. When a man began to dump around we didn't lose time by feeling for his pulse or looking at his tongue. Three or four stones were put into the fire to heat, blankets borrowed for the occasion, and when we got steam on, the knots and twists and kinks in that chap's case had to unravel. He'd come out as long and flat and thin and white as you please, and if any one pointed a finger at him for the next week he'd cry like a baby.

"Next to a sweat we had decoctions of herbs, barks, and roots, and once or twice

we tried the earth cure. On one occasion when a red-headed miner from Ohio was laid up with a pain in the side, a stranger came along from White Dog Bend and said he could cure him by laying on of hands. For three long hours he smoothed away at the patient as steady as clock-work, and then there was a row. The 'smoother' asserted that the cure was complete, while the patient denied that the pain was a whit easier, and, of course, we stood by our companion and gave the stranger a tumble off a cliff twenty-eight feet high into an old snowdrift eighteen feet deep.

"But as I said at the start, sickness became so prevalent, and our plain remedies had so little effect, that it was finally decided to send up to Sacramento for a doctor. The idea was to have him come down and brace us all up and leave medicines and remedies, and the expense was to be borne by a shake purse.

"A letter was sent to a dealer in the town, asking him to forward a doctor, and in about five days along he came. He was a young man of twenty-four, just out of college in the East, and just landed on the slope without a dollar in his pocket, and all he brought to camp with him was a lancet, some prescription blanks, and a stick of salve for making sticking-plasters.

"There were four men in the hospital that day, and after a bit the doctor entered to take a look at them. It happened that he came to Big Jim Smith first. Smith was threatened with inflammatory rheumatism, and was in no mood to take nonsense.

"'Run out your tongue,' said the doctor, as he bent over the man.

"Big Jim displayed it, but in such a begrudging way that it was plain to see that he thought it all bosh.

"'Your pulse,' said the doctor, as he reached over for Jim's great paw.

"'Pulse? I haint got any!' growled Jim.

"'Oh, yes, you have. Here it is in your wrist. Keep still for a moment.'

"'Stranger,' said Jim, after the doctor had dropped his hand, 'd'ye mean to tell me that ye kin feel a man's wrist and tell what ails his inside?'

"'Yes, in a measure.'

"'Excuse my not calling you a liar, but some of the boys will do it for me afore you're an hour older.'

"'What are your symptoms?' asked the doctor.

"'Never had any.'

"'But how do you feel?'

"'Sick.'

"'How were you taken?'

"'Stranger, what are ye driving at?' demanded Jim, as he sat up in bed.

"'Have you got pains?'

"'In course I have! D'ye 'spose I'd be lying flat on my back here if anything less'n a ton was holding me down?'

"'Do you ache?'

"'Rayther!'

"'Any fever?'

"'Wall, I git away with a quart of cold water at a gulp.'

"The doctor sat and studied the case for a few minutes, and then he came over to the shanty where the committee had assembled, and said:

"'Gentlemen, the case of Big Jim is a serious one. He needs a change of diet, scenery, and air. My advice is that you brace him up as well as you can on chicken soup and beef tea, and then send him off for a trip to Cuba. I'll look at the other cases in the morning.'

"But he never did. When the boys found that he had come without even a dose of quinine, and they heard him talk about chicken soup and trips to Cuba for a man who hadn't five dollars to his name, they waited upon him in a sort of hilarious body, and at midnight he went up the trail at the rate of twelve miles an hour, with a crowd behind him aching for his ears as relics.

"Next day we heated half a ton of rocks, took six or eight blankets, and gave Big Jim such a sweat that all his toe-nails shed off, and rather than be cured in the same way the other men got well.

"'I did have some faith in the chap,'

explained Jim—'just a leetle bit until he axed my symptoms. That floored me. The idea of sending 200 miles for a doctor to walk in on ye and not be able to tell symptoms from the all-firedest backache a man ever had, topped off with chills galloping up and down the spine wall. I'm only sorry that you moved the procession on him afore I was able to head it!'"

THE SPIRITUAL AND ANIMAL IN ILLNESS.—Keep ever in your mind that many people seem to be two-thirds spiritual and one-third animal; and that others seem to be one-third spiritual and two-thirds animal, between which are all intermediate kinds. If you attempt to treat all of them alike, you will certainly fail. The mental management of the sick is often more difficult than the physical. A close study of mental therapeutics is one of the necessities that the regular profession is still extremely deficient in. Irregulars often give a mere placebo, or useless agent, which faith (psychological energy) on the part of the patient potentizes, and a wonderful cure (?) results. Novel remedies often assist the cure through mental influence. Many regular physicians give valuable, true remedies, but give them just as they would administer to a horse or a sheep, and seem to despise the aid of faith, mystery, expectation, and hope. They must learn to depend more on the aid of hygiene, diet, and mental impressions in simple cases, and less on large, crude doses of medicine. DR. CATHELL.

DIABETES—EARLY SYMPTOMS.

A GREAT many people contract this distressing and very fatal disease, long before they are become aware of it, and it is for the purpose of giving a hint or two that may be of benefit to the readers of this magazine that this article has been written.

The first marked symptom that we notice in the above disease, is the cessation more or less of perspiration, although we can not explain it. No local pains may exist, spontaneous or otherwise; but later in the progress of the disease there are pains in the back, and the emission of urine is very frequent, generally greater during the night, thus depriving the patient of much of his sleep. The quantity of urine passed when the disease is fully developed is usually considerable—something like a gallon or more, in the course of twenty-four hours. At the commencement the amount voided is not remarkable, but it soon augments, till the maximum is reached, when the diabetes has also reached its highest point. This supersecretion is not of the greatest importance, since diabetes may exist without the quantity of urine exceeding that in perfect health—this point is well authenticated by many eminent observers. The urine immediately after its emission is transparent, not so dark-colored as usual, and sometimes colorless, though ordinarily of a yellow-straw color. If examined some time after emission, it usually resembles the color given to a large quantity of water in which some honey has been dissolved. It is often inodorous, though frequently strong with the odor of violets. Notwithstanding its great quantity, diabetes urine has a much greater specific gravity than that of normal urine. That which is first voided in the morning is heavier than that which is passed during the day, although it contains less sugar.

When diabetes urine is left undisturbed for two or three days in a moderate temperature it acquires an odor of wine or sour milk; and instead of being ammoniacal, as it certainly would be if in ordinary condition, it is very acid, this being due to the presence of carbonic acid produced by fermentation. The urine in a case of diabetes always turns to the right in polarized light. In this disease

the mouth is dry and harsh, as with persons suffering from intense thirst. The saliva is not abundant, but thick and frothy, and almost always acid. Great augmentation of the appetite is one of the principal symptoms of this malady, and notwithstanding the large amount of food which may be taken, digestion up to a certain point goes on without trouble.

In the early stages of this disease there is usually marked constipation and the fecal matter is frequently inodorous; this is an indication of the great intensity of the complaint. The skin undergoes many remarkable alterations, becoming dry and rough—usually its sensibility diminishes sometimes to the point that it is entirely wanting. Cutaneous perspiration almost entirely disappears.

A new and very successful method of treating this hitherto obstinate disease has been lately introduced, and like other diseases which not many years ago were regarded as desperate if not entirely fatal, it can be said to have lost a great part of its terrors to the skillful physician. To be sure there are in America but a few who have made diabetes a specialty, yet their record of its successful treatment is encouraging to those who suffer with it.

E. S. SMITH, M.D.

NEW YORK.

A DUTCH LADY-DOCTOR.

(*Concluded from the April No.*)

THE "arts-diploma" is a State certificate, and according to the law of 1865, indispensable for the professional medical man. Miss Jacobs could, therefore, have established herself and tried to get some practice. But, besides the "arts-diploma," there is also a university degree, the English M.D., the Dutch doctorate, and as many persons continue their studies till they obtain also the latter title, Miss Jacobs decided that she would not leave the university before obtaining it.

She went back to Groningen, and began her dissertation, but she had now a great deal of ill-luck. First, she had three times to give up her subjects for want of the materials indispensable for her researches, but fortunately she could bring to an end her fourth subject ("On localization of physiological and pathological phenomena in the brain.") And secondly, her father became suddenly very ill, so that he had to give up his practice. What to do? His practice was the only source of income for himself and family, consisting then of six members. So in the middle of her studies, Aletta took up his practice, and thinking she would earn more by being a professional doctor in Amsterdam resolved upon leaving the university and giving up her doctor's degree. But some of her friends convinced her that her plan was by no means good; she should first finish her studies and then go for some months to a foreign country before establishing herself. Considering all the obstacles, it was really astonishing that Miss Jacobs was ready with her dissertation within the usual space of time, and was graduated on the 8th of March, 1879, after having defended with much success, not only her dissertation, but also the thirteen theses following the same, of which, especially the 3d: "Chloroform should be used more frequently in confinements than has been done as yet," was severely attacked by one of the professors. But as a conviction is a sacred thing to Miss Jacobs, and she was never in the habit of fearing any one, however disagreeable the result might be to herself, she defended her thesis with all her energy and eloquence, and the doctor-diploma was given to her. This event brought Miss Jacobs' academical life to a close.

But did Dr. Jacobs feel satisfied with the result of her medical studies? In many respects, yes; but in some, by no means. It had been for her a very pain-

ful discovery to see how rarely in severe cases recovery of the patient is in the hand of the doctor, even if he is one of the most skillful physicians. But on the other hand her studies had also convinced her, that though the disease once developed, could not always be cured, many diseases could be prevented, and what she thought the best way for it she had explained in her 9th thesis: "Hygiene should be taught in *Middelban* (Higher) Schools for girls by special teachers in special hours."

Three days after her graduation, Miss Dr. Jacobs crossed the Channel to spend a few months in the London hospitals. A long time she hesitated between London and Vienna, but she never repented of choosing the English capital. She was very kindly treated by many persons, but more especially by Dr. Sturge, whose assistance during her stay of five months was of very great value to her.

II.—AS PHYSICIAN.

Miss Jacobs returned from England in the second part of August, 1879. The Medical Congress in Amsterdam was held about that time. Miss Jacobs intended to establish herself at Amsterdam, and open her "consultative practice" on the 15th of September; however, only for women and children. This proved clearly enough, she had no mind to follow up the advice of one of the professors, who proposed that she should become his assistant for about three years, and to settle after that as a specialist in surgery, as he had several times observed how steady her hand was and how keen her eye. However flattering this proposition, she declined; she preferred the pathological and obstetrical parts of the medical science, for though the "arts-examination" includes, as the reader has seen, the three branches of the medical science, every medical man feels that in practice they are too much for one person. Thus, every doctor chooses between pathology and surgery, according to his individual taste, but as he has a general knowledge, he does not hesitate to lend his help whenever called for, unless he thinks the experience of a specialist is required.

Although it is but three years since Miss Jacobs settled as doctor and "accoucheure," the result has already proved that she made the right choice.

Her patients are people in easy circumstances, moving in the higher circles of society. Nothing can speak more in her favor, as she had many prejudices to conquer at first. Though some improvement is observable, it must be admitted that, as a rule, the higher classes do not sufficiently honor the labor of women. The number is still rather small who think well of a woman who earns her own living, and large of those who think her far below those women who are wasting their time from morning till night. Hence, how great were the difficulties that met the woman who opened for herself a new sphere of activity, one which forced her during the many years of preparation to associate exclusively with men of every age. The second prejudice Miss Jacobs had to conquer was her origin. There is no doubt but that her family descended from Jewish stock, and in Holland there is still some prejudice against Jews, even when it is known that they are no longer of the Hebrew faith. Miss Jacobs was not educated as a Jewess.

As to her character, she combines great gentleness with deep compassion for the patient, and a vehement aversion of every kind of untruth and affectation. Those who come to her with complaints of which they knew beforehand they would have to submit to a local examination, are at once presented with the alternative of going away without delay, or of being helped by her as she judges necessary. Her little speech never fails of the desired effect.

Miss Jacobs requires for her services the highest fee charged by Dutch doctors. This at first occasioned much amazement among some people, who, no doubt, think that a woman should be paid less than a man. But she never allows people to haggle with her. They are plainly told that in future they will

do better to call for cheaper professional assistance, but that she declines the honor. The reader would draw a false conclusion if he thought Miss Jacobs close-fisted. Nay, in many matters she is always very liberal, and allows others often to have the best of the bargain, perhaps oftener than is reasonable. She can not endure meanness in well-to-do people. In the first weeks of her practice she gave a great proof of disinterestedness. Two families contracted with her for a certain sum to pay a daily visit to their children. A few days after, the lady doctor told the parents she had resolved to break the agreement, being convinced it was pernicious for the children to be asked every day, "How are you? Do you feel any pain?" etc. In future she would only come when called for, but promised, how often that might be, her bill would never exceed the set sum, while it would be less when her help had been only rarely required. By this arrangement she surrendered a part of her benefits at a time when she was by no means sure of success. Several times she has succeeded in curing persons who were pronounced past cure by one or more medical men. This must chiefly be ascribed to the great interest she takes in her patients. In severe cases she is thinking of them by night as well as by day, and as long as he or she is alive, she considers there is hope, and will persist in applying every possible remedy. Thus she saved her mother when pronounced past cure by two of the best professors, and also several other persons. Some time ago, a lady came to her who had been attended, without the least success, for two years, by Professor Lehmann, a renowned specialist. Before Miss Jacobs accepted her as her patient, she went to Professor Lehmann, informing him of the lady's wish. "Then you intend to follow another method?" he asked. "Not at all," Miss Jacobs answered, "as I am sure your method is the only right one in this case; but I will try at the same time, whether it does not make a difference that you are a gentleman and I am a lady." And the result? Within two months the patient was perfectly well, to which the professor testified. Miss Jacobs observed: "I know, of course, that such a complaint can easily ruin the whole constitution, but I also supposed that a hysterical nervousness, such as you unwillingly excited in this weak lady, made her recovery impossible."

No doubt Miss Jacobs' success is a great eye-sore to many of her Dutch *confreres*, and no doubt they think it a very bad thing for them. One of our Dutch professors went so far as to declare that the *practice* of the medical sciences should be exclusively in the hands of ladies. Some doctors, however, oppose Miss Jacobs in such a ridiculous way that they do themselves more harm than good. But what the gentlemen doctors may say is indifferent to the lady doctor, who quietly pursues her own way.

From the very beginning Miss Jacobs desired to be of use to the poor, as she knew by experience that among the lower classes there are many women who neglect certain diseases rather than go to a doctor, and that their aversion should not always be explained as narrow-mindedness and prudery. As many expenses were connected with the opening of a "klinick," as it is called, she could not realize her desire before the beginning of this year. She may now be consulted two mornings every week free of expense, and many hundreds have already profited by this opportunity.

In Germany the lady doctors, such as Miss Tibertius and Miss Lehmus in Berlin, are tolerated, but nothing more. They have no rights, and are not considered equals of the gentlemen practitioners. They are not allowed to sign authentic documents, such as certificates of births and decease. No such thing in Holland. Miss Jacobs has the same rights as any of her associates, and her signature is as valid as theirs.

ELISE A. HAIGHTON.

AMSTERDAM, 1882.

A PHYSICIAN'S MEMORANDA.

REMOVAL OF STRONG ODORS FROM THE HANDS. — Ground mustard mixed with a little water is an excellent agent for cleansing the hands after handling odorous substances.

DIET IN BRONCHITIS AND ASTHMA.—A full meal with its resulting pressure upon the diaphragm is frequently followed by sudden death in patients suffering with bronchitis and asthma. Such persons should always leave the table hungry, and in selecting food should give the preference to concentrated nourishment, avoiding soups or other liquids and all substances the ingestion of which causes flatulence.

NIGHT SWEATS OF CONSUMPTION.—Sponging the chest with salt and water at bedtime, in many cases arrests the sweating completely.

BRUISES. — Tincture of arnica is in general use as a lotion for bruises, but its value is greatly overestimated, and it is objectionabie in that it sometimes acts as a powerful irritant. The following mixture used as a lotion is quite efficacious and no danger attends its use: Muriate of ammonia, two drachms; vinegar and water, of each two ounces; mix.

FISSURED NIPPLE.—A simple and safe means for the relief of cracked nipple is to powder it repeatedly with pulverized gum-arabic. Immediately after the child has suckled, the powder should be dusted over the surface and the nipple protected from the air.

STINGS OF INSECTS.—The juice of the red onion is a perfect antidote for the sting of bees, wasps, hornets, etc. If applied freely soon after being stung, it gives almost instant relief. The sting of the honey-bee is always left in the wound, and should be extracted before applying the onion juice.

FETID FEET.—A prompt remedy for this disgusting affection is found in washing the feet with a solution of chloral (one part of chloral in one hundred parts of water), and keeping them enveloped in compresses wet with the same. Another efficacious method is to powder the interior of the socks with a powder composed of one part of salicylic acid and five of starch.

TO REMOVE INDIA-INK MARKS.—Blister the part with a cantharides plaster a little larger than the mark; then keep the place open with basilicon ointment for a week; finally dress with simple ointment to heal it. As the new skin grows the tattoo will disappear.

ACID BURNS.—Make a soft paste of calcined magnesia and water, spread thickly on a soft cloth and apply to the parts. Renew in twenty-four hours. This gives speedy relief and leaves no scar.

NERVOUS HEADACHE.—When the pain is frontal, and the blood-vessels are full and throbbing, relief may often be obtained by the constant application of cold to the head. The head should be elevated on a hard pillow, and hot applications made to the feet so as to draw the blood toward the lower extremities. Should the pulse be small and contracted and the vessels of the head full and throbbing, while the hands and feet are cold, it is a good plan to put the patient into a warm bath at 97° for ten minutes, and then to bed. It is astonishing the relief this simple remedy sometimes brings.

PNEUMONIA IN TOPERS.—When pneumonia attacks the steady, square drinker, one who carries regularly his pint to a quart of whisky daily, it comes exclusively under the domain of the undertaker, as the first case of recovery by any known method of treatment has yet to be reported. L. H. WASHINGTON, M.D.

WHITTIER'S OPINION OF A BOILED DINNER.—The old-fashioned New England beverage (cider) was mentioned, and Mr. Whittier stated that he had once derived much benefit when unwell, "when nothing tasted good," from the use of cider. Huntington suggested that with-

out cider we should not have vinegar. "Well," said Whittier, "vinegar is not of much use, after all." "Except," replied Huntington, "to eat on cabbage and cucumbers." "Neither of which are fit to be eaten," remarked the poet. "I think it would be a good idea to start a prohibition party on those two articles. As for cabbage, it is not fit to be eaten; if you cook it in the house, you have got to burn your house down afterward to get rid of the smell; it is certainly the most diabolical smell that was ever invented"; and Whittier, who was sitting near the open stove grate, upon the top of which he had deposited his tall hat, folded his hands and laughed a hearty silent laugh. "What do you think of onions, Mr. Whittier?" asked I. "Well," he replied, "onions are not quite so bad, for you *can* get rid of the smell of those in three or four days." "Then," said Huntington, "you would not approve of the old-fashioned 'boiled dinner'?" "*No.* I think that is a detestable dish. I remember that my father used to have it, in which cabbage, onions, beets, potatoes, turnips, and carrots were all boiled up together, and turned out into a great dish all in a heap, with a great greasy piece of meat in the middle. I think that is the reason why the present generation is not so strong as the former. It is owing to the way the parents lived, eating so much pork and potatoes. Our last war showed that. The farmers were not nearly as strong as the men recruited in the cities —Portland, Portsmouth, and Boston." "But the people in the cities do not have the free air we get in the country," said Huntington. "I know that," replied Whittier; "but they live better, and that makes a great difference."—*Harper's Magazine.*

KITCHEN LEAFLETS.—No. 16.

WOMAN'S EDUCATION AND NEEDS—BILL OF FARE FOR MAY.

IT may not quite belong to this department, yet I feel that I should have something to say with regard to the question of woman's right to education and woman's right to do what she can toward self-maintenance. The stand taken by the rector of Trinity church, New York, on the subject of woman's sphere, has awakened pretty lively discussion, and I am rather glad than otherwise that it has been brought so conspicuously before the people. To me it seems little short of the wonderful that the chief of a very prominent church organization, a man presumably highly educated and well-informed, should close his eyes and ears to the demands of modern progress, and assert views which in the days of mediæval despotism and ignorance were prevalent concerning the place and work of woman. Then she had little to do with the affairs of the world; she cooked and scrubbed and spun at home, and nursed and trained the children, and was passively and subjectively ignorant of the out-of-door world. To-day she is found in almost every walk of life, and her usefulness and adaptation in the affairs of business have been so thoroughly demonstrated that in some departments she has become indispensable. What would our schools do without her, for instance? She has become a monopolist in the teaching office, and that at the instance of her brother, who at length discovered her competence for it. And yet the reverend gentleman of old Trinity would exclude her from those privileges of high and liberal education which will the better fit her for the important duties of instruction. His very pronounced stand in the matter has brought out an equally pronounced expression of opinion against him from men of eminence, most of whom are educators of experience and speak from personal knowledge, whereas the

gentleman of Trinity, aside from his own school and college course, knows little about the business of teaching.

To say that high mental training is incompatible with the duties of home-life, is to say what is untrue; for the efficient and thorough performance of household work involves as wide a range of intelligence as any so-called business. To have charge of a large family, to meet its daily wants in food and clothing; to minister to the needs of the sick and regulate the whims and caprices of the young; to maintain a steady methodical routine in the kitchen, dining-room, parlor, and bedroom — making neatness and order wait upon comfort and enjoyment — to be at once wife and mother, companion and adviser — what facilities, what training and development are not essential to the performance of all this?

But women are not constituted alike any more than men are; they have their leanings and their biases; some are not well constituted for the performance of domestic work; some are not adapted to the care of children; yet, take them as they average, the great majority are fond of household duties, and there is less craving in them than in men for change and variety. I know highly educated ladies who enjoy the work of their kitchen and who can prepare a dinner that will tempt the dullest appetite. They superintend the economy of their homes, having regard to minute details, and their homes are charming places to visit.

It is trite enough to say that it is the home that gives character and tone to society — but who makes the home? Has not woman always been intrusted with its direction—or, rather, compelled to take care of it? And to do all that the age expects of her, can she be too well educated or too competent? Cultivated and refined men are exacting; they don't wish ignorant and unrefined wives; they want *help-mates* indeed, and how are they to be supplied with such help-mates unless woman has equal privileges with themselves in education and mental training?

Dr. Aikman in his "Life at Home" says if a woman "would have her husband love her more and more as life advances, she must give him more and more to love—she should endeavor to make herself *mentally* attractive"; and he goes on to say further that it is not strange that many men grow weary of their homes because of the barrenness and dullness of their wives' minds, and seek in other society the interchange of thought and opinion which they enjoy. After marriage few women have much leisure for study and reading, and, if they have not had good advantages for culture previously, they are not likely to feel inclined to make use of such opportunities as come to them for keeping their minds fresh and alert.

BREAKFAST.*

Crushed-wheat Porridge. Potato Puffs.
Oatmeal Breakfast Cake. White Bread.
Canned Fruit. Broma.

DINNER.

Farina Soup.
Roast Chicken. Mashed Potatoes.
Stewed Carrots or Parsnips. Tomato-Bread-Sauce.
Gluten and White-Flour Bread.
Orange Custard.
Fruit.

SUPPER.

Graham Gems. Boiled Rice.
Stewed Fruit.
Orange Sponge-Cake. Cambric Tea.

CRUSHED-WHEAT PORRIDGE.

2 cups of crushed wheat.
2 quarts of cold water.
½ teaspoonful of salt.

Look the wheat over carefully, and having placed it in a double boiler, pour the water on it, stir thoroughly, and cook one hour after it begins to boil. Add the salt about ten minutes before the porridge is done.

POTATO PUFFS.

2 cups of cold mashed potatoes.
2 tablespoonfuls of melted butter.
2 well-beaten eggs.
1 teacupful of milk.

* The right to republish any of the recipes in these formulæ is reserved.

1 cup of cold roast beef, chopped fine.
½ teaspoonful of salt.

Add the melted butter to the potatoes and beat up to a creamy consistence before adding anything else; then stir in the eggs, milk, salt, and lastly the meat. Beat all together and bake in hot gem pans, buttered—using a quick oven—about half an hour.

Farina Soup.

2 quarts of mutton or beef stock.
½ cup of farina.
½ cup of cream or milk.
1 beaten egg.

Mix the farina with the milk, add the egg, and stir all into the stock, and cook half an hour. Flavor with bits of celery, or parsley, if liked.

Roast Chicken.

Pick and draw the fowl carefully so that no intestinal matter remains or any fine feathers on the skin. Wash out well in three waters, and wipe dry with a cloth. Stuff with a mixture composed of one pint of bread-crumbs, one tablespoonful of melted butter, two tablespoonfuls of hot water, and one teaspoonful of salt. Add more stuffing if this is not enough to fill the body and crop; then sew the openings up and lay the fowl in the pan with the wings and legs secured close to each side with skewers. Pour a cupful of boiling water over it and roast in a quick oven about an hour and a half, basting often. In the meantime stew the giblets, neck, and feet in one pint of water, and when tender take them out and chop the giblets fine. When the fowl is done remove to a hot dish and pour the stew water into the drippings; boil up once, add the giblets, thicken with browned flour, boil again, and send to the table in a gravy boat.

The giblets are the heart, gizzard, and liver. Serve with tart jellies or fruit sauce.

Gluten and White-Flour Bread.

2 pints of gluten flour.
1 pint of white flour.
1 pint of tepid water.
½ of a yeast cake dissolved in water.

This recipe makes one medium loaf. Proceed in the manner described for white bread in the Phrenological for January of this year, using white flour for knead and moulding. Bake one hour in a quicker oven than is used for white bread.

Stewed Carrots.

2 large carrots.
1 cup of milk.
2 teaspoonfuls of flour.
½ teaspoonful of salt.

Chop the roots fine and put them on the stove to cook in a stone pipkin; let them boil two and a half hours, or until they are tender. Make a dressing thus: boil the milk, mix the flour in a little cold milk, and stir into the boiled milk; add the salt and a very small piece of butter if desired. Pour this dressing on when ready to serve.

Tomato-Bread-Sauce.

1 quart of stewed tomatoes.
3 teaspoonfuls of sugar.
1 tablespoonful of Graham flour.
1 cup of milk.
½ teaspoonful of salt.
4 medium-sized slices of toasted Graham or white bread.

Cut the bread, after it has been toasted, into pieces about one and a half inches square and place them on the bottom of the dish to be used for the table. Stir the sugar and salt in the tomatoes, mix the flour in the milk, and stir all together. Boil about five minutes; then pour over the toasted bread and serve. (*W. W. Cure*, adapted).

Orange Custard.

5 medium-sized sour oranges.
½ cup of white sugar.
1 quart of milk.
4 eggs.
½ teaspoonful of salt.
2 even tablespoonfuls of corn-starch.

Peel, seed, and cut the oranges in small pieces, sprinkle the sugar over them and then mix it through and let them stand until the custard is ready. Set the milk on the stove in a double boiler, and when it boils stir in three tablespoonfuls of sugar, the salt, yolks of the eggs well-beaten, and lastly the corn-starch mixed in a little cold milk. Stir all briskly, and when boiling remove from the fire and pour over the oranges. Set away to cool. Now beat the whites of the eggs and one tablespoonful of sugar to a stiff froth, and when the custard is cool, take a tablespoon and drop the white froth in spots over it.

A pretty dish and a delicious dessert.

Boiled Rice.

1 pint of rice.
2 quarts of hot water.
1 teaspoonful of salt.

Examine and wash the rice in several waters. Put the water and salt in a double boiler, then stir in the rice. Cook about half an hour from the time it begins to boil. Don't stir the rice with a spoon, but shake the kettle around occasionally to separate the kernels. Serve as soon as done, as rice loses much of its agreeable flavor and quality by long standing.

ORANGE SPONGE-CAKE.

½ cup of cold water.
2 cups of sugar.
2 cups of flour.
2 teaspoonfuls of baking powder.
4 eggs—yolks and whites beaten separately.
The juice of two small oranges and half of the grated yellow rind of one.

First beat the eggs; then mix the sugar, yolks, and cold water together; stir in the flour and baking powder (well sifted), then the whites, and lastly the orange juice and rind. Bake in a quick oven about half an hour. Do not look at the cake until it has been in the oven fifteen minutes.

REMARKS.

See JOURNAL of Mar., 1882, for Oatmeal Breakfast Cake.
" " May, 1882, for Stewed Parsnips.
" " May, 1882, for Graham Gems.
" " Aug., 1882, for Mashed Potatoes.
" " Feb., 1883, for Broma.

Cut fresh bread with a knife which has been previously heated by dipping it in boiling water. The bread will not be apt to crumble then. Bread of the fermented or leavened kinds generally should not be eaten the same day it is made. MIRA EATON.

USEFUL ANALYSES.—The students of the Michigan State Agricultural College are combining utility with instruction, and are analyzing, in the laboratory, various nostrums with which quacks and speculators are flooding the country. The following, from the *College Speculum*, have been analyzed so far:

"1. *Coaline.* Eight ounces of sal-soda (carbonate soda) in a gallon of water, with a few drops of nitro-benzol to give it an agreeable odor. Costs 3 cents a gallon; retail price 40 cents.

"2. *Silver-Plating Fluid.* An ounce vial of solution of nitrate of mercury, which will form a temporary silvery coating when rubbed on brass, copper, or silver, which speedily tarnishes when exposed to the air. Costs 3 cents; retail price 40 cents.

"3. *Nickel-Plating Fluid* is the same as 2, except that a little nitrate of copper and nitrate of nickel are added to the solution of nitrate of mercury. Costs 3 cents; retail price 50 cents to 75 cents.

"4. *Fire-Test Powders*, to prevent explosions in kerosene lamps, the breaking of lamps and chimneys, and the danger of burning from the use of low-grade oil. These are pill-boxes containing one or two ounces of common salt, colored with aniline red. Costs 1 cent a box; retail price 60 cents, or two for a dollar.

"5. *Fire-Proof Powder*, from Wisconsin, is water-lime. Costs 1½ cents; retail price not known.

"6. *Silver Polish.* Pill-box filled with water-lime. Costs ½ cent; retail price 25 cents.

"7. *Ozone.* A package of about one-half pound weight, consisting of pulverized sulphur, colored with lamp-black and scented with oil of cinnamon. Costs 4 cents; retail price $2.

"8. *Spear's Preservative Fluid* consists of one ounce bisulphate of soda dissolved in a pint of water. Costs 5 cents; retail price $1.50.

"9. *Marie Fontaine's Moth and Freckle Cure.* 'For external use only. Put the contents of this package into an eight-ounce bottle, and then fill with rain water.' The package contains 32 grains of corrosive sublimate, or mercuric chloride. Costs ½ cent; retail price 50 cents."

REMARKABLE VITAL STATISTICS.—The Clerk of School District No. 45, Washington township, Morris County, N. J., embracing Schooley's Mountain Springs, has carefully canvassed the district, and reports the following statistics for the year ending April 15th, 1882:

Persons over 100 years of age, 1; between 80 and 90, 5; between 70 and 80, 10; between 60 and 70, 14; between 50 and 60, 38; between 40 and 50, 30; between 30 and 40, 42; between 18 and 30, 72; between 5 and 18, 88; under 5 years, 34. Total 334. During the year there have been but two deaths in the district, both of them old persons, one 93 and the other 71. Of the resident population under 26 years of age there has been but *one death in nine years.—Sanitarian.*

We know the district and can testify to its healthful character and the beauty of its scenery.—Ed. P. J.

NOTES IN SCIENCE AND AGRICULTURE.

Wind an Electrical Phenomenon.—Mr. H. R. Rogers discusses a theory of wind in *Science* at considerable length, in which he wages the opinion that wind is due to electrical action, and makes several noteworthy statements; for instance:

"The wind is moving air—this will answer for a rough definition, where only effects and not causes are considered. *The wind is the electric force operating on and within the air, variously in different parts and portions of the air*—this may be called a definition which considers causes as well as effects. Faraday says that 'the earth is itself a magnet, pervaded in every part by this mighty power' [magnetism]; and he supposes that it has a purpose. The earth has its magnetic polarity. To its magnetism certain electrical currents are related. Between the magnetic earth and the enveloping magnetic atmosphere and its magnetic clouds there is an electrical commerce and interplay. The law of a necessary equilibrium is proclaimed by every thunder-storm, by every shaft of lightning that visits the earth. Does not the same force find in the air one of its chief agents? Who can doubt it? We can not then be far out of the way when we say that *in the interplay of that subtle, all-persuasive principle is found the key to the theory of the winds.*

"Thus, in viewing the earth and atmosphere as vast reservoirs of that subtle principle shifting back and forth to maintain an equilibrium, we believe that we are enabled to see the workings of the very force which moves and sways the atmosphere; which causes its currents, both general and special; and which gives rise to its more extraordinary and yet unexplained phenomena. It is not excessive boldness on our part to affirm that never as yet has due attention been paid to the electrical changes in the conditions of the earth and of the atmosphere—and, as scientists are beginning to suspect—of the sun also.

"It is known that electricity moves with difficulty through air. It may far more easily be the cause of movement of the body of the air, of which it is itself a vital constituent. By virtue of the associated electricity in each, one body of air or one stratum of air is attracted toward another, or repelled from another, or otherwise influenced, according to the law that likes repel and unlikes attract. But, besides the mutual influence of electrified bodies and strata of air upon one another, there is the controlling influence of the established electric or magnetic currents upon these electrified bodies and strata, and the controlling influence of the magnetic earth itself and her hidden currents. Such are certain necessary elements in the problem of the wind that scientists may not leave out of their reckoning.

"In support of the electrical hypothesis we have the influence of high authorities and the demonstration of constantly observed facts. Flammarion, in speaking of the whirlwind, says: 'We know that a whirlwind is a column of air which turns upon its own axis, and which advances comparatively slowly. This whirling column of air is both caused and set in motion by electricity.' Peltier has established, both by numerous facts and by a series of experiments, that the waterspouts of the land and sea are electrical phenomena."

New Discoveries of Rubber.—Two species of india-rubber-yielding trees have recently been discovered in British Guiana, of a character which insures their future profit to the colony. One is a near ally of the Para rubber-tree, and is known to the aborigines of the country by the name of Hatie, its botanical name being *Hevea spruceana*. It is about sixty feet high, with a trunk diameter of twenty inches, and is found on the alluvial oft-flooded land of the creeks and banks of the lower parts of the rivers, where in places it is abundant. The second is not scientifically known yet, as flowering specimens of it have not been obtained. It is one of the largest trees of a forest flora peculiarly rich in large types. The trunk is four or five feet in diameter, and runs up straight sixty or seventy feet unbranched, above which the head extends many feet more. On its discovery recently a few branchlets only could be obtained by shooting them off with large shot. The bark is thick and wonderfully rich in milk of excellent quality, and the elasticity and tenacity of the rubber seems to be unsurpassed. It is scattered in individual trees over a wide area of the colony. The produce of these trees has not been put on the market yet, collectors apparently being unacquainted with them. Samples, however, have been sent to England to be valued. The discovery of these was made by Mr. G. S. Jenman, Government botanist, during an exploration which he lately made in British Guiana.—*Letter to London Daily News.*

A New Building-Cement.—A German exchange describes under the head of "Tripolith," a material designed for building and cementing purposes, which has been patented by Herr B. Von Schenck, of Heidelberg. It is described thus:

"The new material, Tripolith, or triple stone, is a union of silicum, calcium, and iron oxide. These elements are ground, burned, mixed, quickly cooled, then stirred with water and dried, the resulting product being an extremely firm gray mass. In its characteristics, Tripolith stands between gypsum and cement, possessing great hardness and power of resistance, which increase with the age of the material. The cohesive powers

of the stone are not equaled by either gypsum or cement, and can be regulated in from ten to fifteen minutes, by the addition of lime water, in suitable amount. It can be poured in the soft state into any form, whether of metal, gypsum, lime, or gelatine, and can be taken out of the form in ten minutes, much more easily than can be done with gypsum. In all weathers it is the same, neither changing nor undergoing any chemical alteration when subjected to dampness or placed under water. Paint, applied to it, whether oil or lime, does not loosen or scale off, as is the case with gypsum.

"The experiments and trials with Tripolith have now extended over a space of two years, and the results have in all cases exceeded expectations. A particularly noteworthy instance of this fact is shown in the experiments made upon it by a royal commission for testing building materials at the technical school in Berlin, where its advantages were made so apparent, that it was recommended in place of gypsum or cement.

"Tripolith is largely employed in surgical practice, for bandaging, in place of the gypsum casts previously used. The eminent practitioners, Drs. Von Langanbeck and Czerny, give the Tripolith bandages their unreserved approval, on account of their quick hardening, lightness, and imperviousness to water."

How to Test Flour.—The following is quoted from a provincial paper: "Place a thimbleful in the palm of the hand, and rub it gently with the finger. If the flour smooths down, feeling gentle and slippery, it is of inferior quality, though of fancy brand, high-priced, and white as the virgin snow-drift, and will never make good, light, wholesome bread. But if the flour rubs rough in the palm, feeling like fine sand, and has an orange tint, purchase confidently. It will not disappoint you. Such flour, whatever may be its branded reputation, though its price be at the lowest figure, will make good, nutritious bread."

How a Woman Invented a Fire-Escape.—After the burning of the Newhall House, Milwaukee, Mrs. E. Wilson, who lives in a flat at No. 51 East 125th Street, was kept awake many nights through fear of fire, and she then began to plan a fire-escape. One night she solved the problem in her dreams; and a few days later, at No. 227 Sixth Street, she gave a public exhibition of her device. Several builders and many people of curious minds witnessed the workings of it. The fire-escape consists, in part, of an iron platform, with movable railing, which is fastened with heavy bolts to the window-sill. An iron ladder which can be folded up, or a rope one covered with wire, is attached to the platform. When not in use, the whole is folded up and covered over partly with a false sill and partly with the moulding under the window. The false sill and moulding are intended to form an ornamental piece of furniture. When the escape is used, the moulding is opened on hinges, the platform moved out, and the ladder is thrown down. Several heavy men climbed up and down the ladder, and seemed to think that they could escape from fire by it. A stout belt is attached by a rope to the escape for children and invalids.

Electrolysis in the Arts.—The discovery of electrolysis, or the precipitation of pure metals from solutions of their salts, made by Jacobi in 1837, constitutes the foundation on which some of the most important of modern industries are built. It also furnishes a means of separating one metal from another more completely than by any other known method. Electrolysis has recently been successfully applied to the production of selenium. This element, discovered by Berzelius, near Falun, Sweden, bears some resemblance in its properties to sulphur. The most remarkable property of selenium, however, is that light greatly modifies its power of conducting electricity. Mr. Bell has made an ingenious application of this peculiarity of selenium in his photophone. Hitherto selenium has been manufactured only in limited quantities, and cost about $100 a pound. Late improvements have reduced the price to $4.00 a pound. The source of selenium is a selenide of copper and lead, a native mineral obtained from the Argentine Republic.

The Responsibilities of an Engineer.—An engineer who tries to understand his business must study much; he must be above the common laborer or mill operative, and in fact above the head bookkeeper and confidential clerk in point of education; he must have a clear head, a steady hand, and a brave heart. They have nothing strange or new to contend with; their paths are well-beaten and plain; but with the engineer, how is it? He has that subtle thing, fire, that powerful agent, steam, to handle and control, and out of his own brains he must find many of their laws. Thence the emergencies that arise every day and the responsibility which he carries; he is his brother's keeper; he, by a very small mistake, may hurl hundreds into suffering and death, and he must contend with all these subtle agencies and bear these awful responsibilities, and should be paid accordingly.

Conduct of Water Exposed to High Temperature.—A kettle filled with boiling water was hung with the lid on in the hottest room of a Turkish bath. The temperature of the surrounding air was 262° F. After about an hour the temperature of the water was taken, and indicated, as was expected, 212°. The kettle was then re hung with the lid off. The temperature of the room was now 252°. In twenty minutes the temperature of the water had fallen to 185°; in thirty minutes to 178°; in forty-five minutes to 170°, and was evidently still falling. The manager stated that it generally fell

finally to about 140°, when a point of equilibrium seemed to be established, and the water neither got hotter nor colder. The experimenter, Mr. A. J. Hadcock, supposes the loss of heat was due to rapid vaporization and conversion of the sensible heat of the water into the latent heat of steam, and as dry air is a very bad conductor of heat, the heat required to convert a portion of the water into steam had to be abstracted from the remainder of the water, thus lowering its temperature. In substantiation of this explanation it is well known that if water is placed in a vessel over a large bulk of strong sulphuric acid in the receiver of an air-pump, and the air is exhausted, the rapid evaporation of one portion of the water will actually cause the rest to freeze.

Effects of Iron on Digestion.—In an inaugural dissertation published at Berlin, Dr. A. Düsterhoff records the results of some experiments bearing on this subject. One gramme of fibrin was added to twenty c.c. of artificial gastric juice, and during digestion equivalent quantities of various preparations of iron were also added. At the end of the process the undigested fibrin was dried and weighed, and the quantity of soluble syntonin in the solution was also estimated. The time of digestion was in one case three hours ten minutes, in another it was seven hours and a half. In the first series 0.0614 gramme of metallic iron was in each case added, in the form of pyrophosphate, perchloride, and protolactate respectively. In the second series various other preparations were used, the amount of metallic iron being in each case equivalent to 0.0077 gramme. Other experiments were made with white of egg, the amount of albumen precipitated by boiling after digestion being estimated. The outcome of the experiment is, that the organic salts of iron seriously hinder and check peptic digestion. Probably the hydrochloric acid of the gastric juice displaces the organic acids from the iron salts, and so is used up; while the free organic acids in the digestive fluids are far less powerful digestive agents than the hydrochloric acid. But this can not be the only cause at work, for perchloride and phosphate also tend to hinder digestion. Even reduced iron has a similar effect, for it partially dissolves in the juices, forming chlorides. Its solubility, like that of the phosphate, is, however, not very great. Ferrous salts seem to interfere less with digestion than ferric salts.—*Practitioner.*

Tree Planting.—Ex-Governor Furness, of Nebraska, read a paper on "Tree Planting and Growing on the Plains," in which he related his experience during twenty-seven years' residence west of the Missouri, his object being to show what had been done practically, was being and might be done toward converting a naturally timberless portion of the country into a tree-growing region. Statistics showed that there had been planted within the present borders of Nebraska 244,356 acres of forest, 605,514,168 trees, about a quarter of which did not grow. The spontaneous growth was about one-half that acreage. Ash, oak, walnut, hickory, and other varieties thrived. Seed-planting was a mistake. As a rule, better success was had by transplanting young trees, when as near as possible all the roots were preserved. Small trees cost less to produce, transport, handle, and transplant. Alternating, especially in certain varieties, had not given satisfaction. Thus far few ills have attended timber culture in the State. The great losses and failures have been from careless handling, planting, and afterward neglect. Too much importance could not be attached to spontaneous timber growing. A far greater proportion of the planting and growing stood and succeeded than in the case of artificial processes. Losses were rare, and only from occasional invading fires, and where too thick on the ground, the stronger killed out the weaker—no loss, in fact—simply an adjusting or equalizing. Personal knowledge was had of many instances where lands which twenty or twenty-five years ago were considered worthless, had now grown to be valued at from $20 to $100 per acre, solely for the timber planted and grown.

Farm Life—1786 vs. 1868.—At a meeting of the New York Farmers' Club, in 1868, one of the members read the following, the first lines having been written by Dr. Franklin:

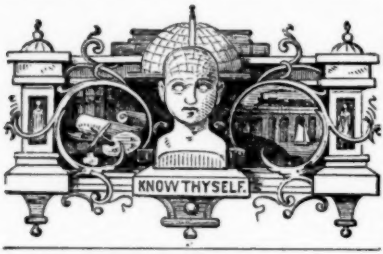
1786.

Farmer at the plow,
Wife milking cow,
Daughter spinning yarn,
Son threshing in the barn,
All happy to a charm.

1868.

Farmer gone to see the show,
Daughter at the piano,
Madam gaily dressed in satin,
All the boys learning Latin,
With a mortgage on the farm.

The Chinese Tallow Tree.—The increasing rarity of tallow of animal origin has attracted the attention of candle and soap manufacturers to a vegetable grease introduced into Europe toward 1848, and the use of which is steadily growing in France and England. The tallow tree is of Chinese origin; it grows also in the north-west of India, and has been introduced into South Carolina, where it has been cultivated for ten years. It produces a fruit the core of which is covered with a layer of thick tallow, and contains a yellowish aromatic oil, used in the same country as a heating agent. After the plucking, which takes place in July in the south, and in October in the north, of China, hot water is poured on them, and the grease is skimmed off, after getting cold, with spoons. The tallow, moulded into the form of bamboo canes, is directly brought into commerce. This tallow presents the appearance of a greenish mass, crystallized, having a peculiar odor. It melts at 44.3°, and becomes solid again at 40.3°.



CHARLOTTE FOWLER WELLS, *Proprietor.*
H. S. DRAYTON, A.M., M.D., *Editor.*
NELSON SIZER, *Associate Editor.*

NEW YORK,
MAY, 1883.

ANCIENT MAN—A RE-CONSTRUCTION.

AN effort has been made recently to represent "primitive man" upon such a basis as the fossil skull-cap, found in the Neanderthal, in 1857, is alleged by some archæologists to offer. The result of the effort is a bust of which the head and trunk at once suggest the gorilla, so much of brutal ferocity are impressed upon the facial lines, while attitude and cranial development approximate those of the fierce quadrumane. This ideal restoration has been on view at the office of the PHRENOLOGICAL, together with a plaster cast of the fossil skull-cap, and so many inquiries have been made concerning our opinion of it, that the editor deems it suitable to occupy a little space in these columns in answering the oft-repeated question: "What do you think of it?"

First. We are not satisfied with the manner of the restoration, as we think that the fossil relic has not received full justice at the hand of the restorer. Taking the plaster cast as it has been furnished us, we are struck at once by its size; and by several peculiarities of structure which indicate an alliance to existing races whose crania are of the long or dolicocephalic type. If this skull-cap be a faithful relic of a "primitive man," then "primitive" men possessed heads and brains fully as large as modern man, as we find him represented in races of low class, as a whole, and as represented by individuals belonging to the civilized races.

The interior or brain space of the cast measures 6½ inches in length, 4½ inches in breadth at the ear openings, 2½ inches in vertical depth at the center, and 2¼ inches in depth in the frontal space, 1½ inches back from the nasal root, while the breadth in the same region is 3¼ inches.

Now taking from the collection of the Institute a skull of average capacity as found in white civilization, we measure its calvarium or skull-cap space, interiorly as we have just measured the cast of the Neanderthal, and find it to be 6½ inches long, 5 inches wide, 3 inches deep at the median region, 2½ inches in the frontal space, and 3⅞ in frontal breadth. This skull, it should be mentioned, is of the broad type, while the fossil belongs to the narrow. A critical comparison of the Neanderthal with a like part of an average negro skull from the Western or Southern Coast of Africa, or with a Patagonian or Australian skull, would not result unfavorably for the "primitive man" as regards brain volume. Mr. Huxley allows its capacity to be 75 cubic inches.

Second. Considerable stress is laid upon the projection of the supra-orbitar ridges by those who would find in this fossil some confirmation of their hypothesis of man's derivation from the lower animals. They point to them, and then to the great

bony eminences over the eye-sockets in the gorilla head, and claim a direct relationship between the two organizations; apparently forgetting the great difference in general structure between them, that whereas the ridges of the gorilla are widely separated from the brain-pan, spread out laterally in a wide border of plate-like process, an inch or more in the mature animal beyond the brain case, and rise considerably above its superior plane, while a strong ridge at the median line of the cranium unites anteriorly with two smaller ridges, one proceeding from the outer angle of one supra-orbitar prominence, and the other from the outer angle of the other. There are also other great bony processes coursing over the occipital portion of the animal's skull and around its base, intimations of the powerful muscular development of its jaws and neck. The ancient relic is smooth and entirely like the modern human skull in its general structure, none of those coronal, occipital, or lateral ridges being suggested by even a salience upon which a Huxleyite could rest an eye-glass. It must be remembered, too, that in producing this fossil, nature has replaced the original salient ridges with earthy matter, which by its accumulation to so great a thickness has probably much increased the apparent extent of the ridges; and consequently a fair estimate of them must take into consideration this tendency of the thickening process, as well as the relation which the inner plate of a skull bears to the outer at the supra-orbitar region.

The projection of these ridges is due, of course, to the breadth of the frontal sinuses, which are generally large in the males of savage races, the American Indian offering a good illustration of the fact. Mr. Huxley quotes Dr. Fuhlrott's language, that "a probe may be introduced to the depth of an inch" in the sinuses of the Neanderthal frontal bone. We have seen specimens of modern skulls in which the separation of the inner and outer tables over the orbits extended fully an inch upward. Mr. Huxley alludes to the large circumference of this ancient skull, 23 inches, due, to be sure, to the great development of the supraciliary ridges, "though the perimeter of the brain case itself is not small." These ridges, he adds justly, "give the forehead a far more retreating appearance than its internal contour would bear out."

A writer in *Longman's Magazine*, in reply to a naturalist who has placed much stress on the supra-orbitar ridges or "bosses" of the Neanderthal fossil, as significant of its "bestial type," says: "What is posed as the 'Neanderthal skull,' is the roof of the brain case, or 'calvarium' of the anatomist, including the penthouse overhanging the eye-holes or 'orbits.' There is no other part of the fragment which can be supposed to be meant by the large 'bosses' of the above quotation. And in this assumption I have to state that the supra-orbital ridge in the calvarium in question is but little more prominent than in certain human skulls of both higher and lower races, and of both the existing and cave-dwelling periods. It is a variable cranial character by no means indicative of race, but rather of sex."

It is in the structure and development of the brain that we should look for points of difference and relation. Open a gorilla skull, and immediately the great distance which separates it in form and volume of brain from man is evident. The gorilla, possessing the largest brain of the quad-

rumana—the highest in the scale of brutes—is thus seen to be after all but a brute. Quoting again from the writer above—"I have found that a vertical longitudinal section brings to light in greatest number and of truest value the differential characters between the lowest *Homo* and the highest *Simia*."

To realize the character of the man who once thought and lived in the ancient Neanderthal skull, we must consider its interior capacity; and only by considering that, can we realize that he was a man very much like men we meet today in the walks of civilization. The artist may claim to use his skull-cap as a model, and build up a mass of plaster representing a brute-man with giant trunk and semi-hairy back and breast, with grinning savage jaws, and forehead low, in which the "bosses" are brought out into special prominence—and with a crown rising to a cone, unlike enough to the fossil—which is rounded in the coronal region—on which short grizzly hair exaggerates the brutish aspect, but he can not persuade us, who have had one glimpse into that fossil, that his work is faithful.

THE GREAT FLOODS.

THE beginning of the year 1883 has been characterized by the occurrence of disastrous floods in both hemispheres which have scarcely their parallel in the past century. Cities of great size, towns, villages, whole parishes have been inundated by swollen rivers and lives destroyed, property to an incalculable extent lost or damaged, and thousands of industrious people made homeless. In Asia and Europe there have been calamities of this kind which drew upon the sympathy of the benevolent the world over. In our own country the valleys of the Ohio and Mississippi have been the scene of such vast accumulations of water that at many points large lakes were created. Of the terrible sufferings at Cincinnati, Memphis, Louisville, Tiptonville, and other places, accounts have been broadly circulated and organized relief has promptly responded to the cry for help sent up by the great number of wet and hungry unfortunates.

Whether or not the occurrence of great floods in our day is due in some measure to the destruction of our great forest tracts, the encouragement of tree planting must as an important measure of internal economy be a part of our national policy; and the sooner some plan is devised and set in action to prevent the wanton and indiscreet destruction of the forest that remains, the better.

A STRIKING DIFFERENCE.

IN glancing over the weekly returns of mortality in several Southern cities we have been forcibly impressed by the great difference in the percentages of the white and colored classes. We have now before us the report for the week ending February 24th of this year, by which it appears that in the District of Columbia the number of deaths among the white population was according to the annual rate of 13.5 to the 1,000; while among the colored people of that city the deaths were at the rate of 29.4. In Richmond the rates are, respectively: for the whites 15.3, for the colored 39.4; in Lynchburg, whites 5.6, colored 46.5; in New Orleans, whites 24.4, colored 58.1; in Jacksonville, Fla. (report for Feb. 17th) whites 8.6, colored 26.

These figures are by no means exceptional in their showings, but tally closely with the averages furnished by the reports from month to month, and force the inference that the negro element in the South is rapidly decaying.

One of the important reasons for this decadence is the indifference of the masses of the colored people to sanitary conditions; their easy, indolent, happy-go-lucky nature tolerating offenses of uncleanness in diet and surroundings which the white will not endure. To be sure, the squalor and filth of the negro quarters in a city affect in some degree the general atmosphere, but the respect paid to the state of his personal environment by the white citizen of a place like Richmond or New Orleans gives him the capital of better health and endows him with a power of resisting the influences of disease which may be transmitted from the poison-infested cabin of his colored townsman. It pays to be clean.

THE WORK OF THE INSTITUTE.

HAS THE STUDY OF PHRENOLOGY BEEN PROFITABLE TO ME?

[A lady graduate of the class of 1880, who is a teacher, sends us the following welcome tribute to the practical value of Phrenology, even to those who do not purpose following it as a profession. The minister, the teacher, the mother, especially are benefited by the light which Phrenology sheds on their important yet difficult pathway.—ED.]

SAID a friend to me, "You must be extremely interested in the study of Phrenology to incur an expenditure so much out of proportion to your moderate income. Does, then, the outlay which you have invested in going through the regular course of instruction and lectures at the American Institute of Phrenology return an equivalent to you?"

If you are referring simply to the mercenary side of the matter, No—not a special advantage has grown out of it for my purse.

"And yet you do not really regret your doing so?"

It may seem incredible to you, my practical friend; but as for me, I regard the result of those six weeks' study of greater value than if I had gained a million. Let me mention as priceless the lessons that taught me how to live. Important, indeed, is this question; for what can you expect of the mind if not based on and supported by a hale, bodily foundation?

How to live according to the laws of health must be learned. I learned it at the Institute of Phrenology, and my present state of health is sufficient proof of the value of its teachings.

The second equally estimable boon awarded me is the mental light received through those instructions, by which life, mankind, nay, the universe, appears to me in a new aspect and clearer than ever.

And, lastly, does not Phrenology offer the key to the problem of self-knowledge, the first and safest step to self-improvement? Are not those arguments in favor of my study sufficiently convincing? Are not the advantages thereof beyond one's current estimation of the value of money and its powers? S. S.

WOULD you study the science of character, reader? look around you. The materials are abundant on every side, ar every step you take will bring fresh ex riences, new truth, new revelation.

Our Mentorial Bureau.

To Our Correspondents.

QUESTIONS OF "GENERAL INTEREST" ONLY *will be answered in this department. But one question at a time, and that clearly stated, must be propounded, if a correspondent shall expect us to give him the benefit of an early consideration.*

IF AN INQUIRY FAIL TO RECEIVE ATTENTION *within two months, the correspondent should repeat it; if not then published, the inquirer may conclude that an answer is withheld, for good reasons, by the editor.*

TO OUR CONTRIBUTORS.—It will greatly *aid the editor, and facilitate the work of the printer, if our contributors generally should observe the following rules when writing articles or communications intended for publication:*

1. *Write on one side of the sheet only. It is often necessary to cut the page into "takes" for compositors, and this can not be done when both sides are written upon.*

2. *Write clearly and distinctly, being particularly careful in the matter of proper names and quotations.*

3. *Don't write in a small hand, or in pencil, as the compositor has to read it across his case, a distance of nearly two feet, and the editor often wants to make changes and additions.*

4. *Never roll your manuscript or paste the sheets together. Sheets about "Commercial note" size are the most satisfactory to editor and compositor.*

5. *Be brief. People don't like to read long stories. A two-column article is read by four times as many people as one of double that length.*

6. *Always write your full name and address plainly at the end of your letter. If you use a pseudonym or initials, write your full name and address below it.*

WE CAN NOT UNDERTAKE TO RETURN UNavailable contributions unless the necessary postage *is provided by the writers.* IN ALL CASES, *persons who communicate with us through the post-office should, if they expect a reply, inclose the return postage, or what is better, a prepaid envelope, with their full address. Personal matters will be considered by the editor if this is done. Anonymous letters will not be considered.*

EVOLUTION.—MRS. G. C.—By reference to a late cyclopædia, you will find this subject described at sufficient length. In brief, the term is applied to the doctrine that the universe as it exists, with all its forms of matter, organic or inorganic, has been gradually evolved from beginnings or sources infinitely simple or primitive.

One of the early apostles who formed a distinct theory of evolution, Lamarck, held that all organic forms, from the lowest to the highest, have been developed progressively from living microscopic particles. Professor Huxley may be said to define the theory as now generally held by its supporters in the following terms: "There are grounds for believing that the world with all that is in it did not come into existence in the condition in which we now see it, nor in anything approaching that condition; on the contrary, the present condition and formation of the earth's crust, the development of land and water, and the infinitely diversified forms of animals and plants which constitute its present population, are simply the final terms in an immense series of changes which have been brought about in the course of immeasurable time by the operation of causes more or less similar to those which are at work at the present day."

The subject has been very elaborately discussed from many different points of view by numerous writers.

RESPIRATION AND IMPURE AIR.—*Question:* Will two persons occupying the same room inhale each other's exhalations? in other words, will a person inhale impure air while there is pure air in the room? or does the impurity mix with the pure air, leaving none perfectly pure? C. L.

Answer: Unless the ventilation is perfect there will be impurities mixing with the atmosphere, impurities arising from respiration and also skin excretion, hence you will see at once the necessity of making such arrangements as will permit the ready admission of fresh air to rooms, especially those which are occupied by several persons.

CLEANSING THE BUST.—SUBSCRIBER.—Use soft water in which a very little washing soda or fine soap has been dissolved, and a soft brush so that the surface shall not be roughened, as would be the case if you used a harsh brush. Unless the soil is difficult of removal, warm water will generally be found sufficient. In using an alkali with water you can scarcely avoid marring the polished surface of a plaster cast.

ELECTRIC BELTS, BOOKS, ETC.—C. L. F.—We have heard of good results following the wearing of an electric belt or pad; whether as a positive result of such wearing or as a coincidence, we are not prepared to say, but we know that there are many devices of the kind in the market, which are simply gotten up to sell, and have nothing of the battery about them. Zinc and copper are the metals usually placed in combination for the production of an electric current. As regards the treatment of disease by electricity, we know that there is much virtue in the application of galvanism under skillful direction, in some forms of nervous disorder. Within a few years the subject of medical electricity has assumed a very important position,

and there are many works on the subject; prominent among them are Beard and Rockwell's Treatise, Pitzger's Manual, Butler's Electricity in Surgery, etc.

VALUE OF WALNUTS AS FOOD.—W. G. D.—We have not at hand an analysis of the nutritive elements of walnuts, peanuts, Brazil-nuts, and other shelly forms of food; as a general rule, however, they are rich in such material. In some parts of France, the people make use of the chestnut as an important part of their table supply; they grind the kernel into flour and with it make a very palatable form of bread. With us of course nuts are used more as a trimming or dessert; as an interjected matter of occasional enjoyment; and very few think of nuts as specially valuable in the economy of nature. According to Letheby, in his table of standard articles, taking human milk at one hundred, maize or indian corn contains one hundred nutritive equivalents. Indian meal is stated as having 11.1 parts albuminous substance; 64.1 starchy matter; .4 sugar; 8.1 fat, and .7 salt, with 15 parts water, making a total of 11.1 nitrogenous matter, and 85 carbonaceous. Comparative values of several foods as ordinarily used have been stated at other times in the health department of this magazine.

BREATHING THROUGH THE NOSE.—C. H. E., of Worcester, Mass., writes in relation to this matter, which we had occasion to consider in a late Number of the PHRENOLOGICAL, as follows: "Since seeing the practice of sleeping with the mouth closed, approved by the editor of the JOURNAL, I have been able to breathe through my nose by a contrivance of my own, worn at night, and made thus: A piece of an old suspender is pinned around the top of my head, the lower part under and supporting my chin. At right angles to this a piece passes around the head and over the mouth, the extremities being fastened by a pin at the back of the head, and where it crosses the first mentioned it is sewn fast. Some care is necessary in adjusting the apparatus, for if the transverse or horizontal piece fall a little below where the lips meet, there is an unpleasant sense of pressure." The plan seems to us a practicable one, and we describe it for the benefit of those who find it difficult to keep their mouths shut when asleep.

What They Say.

Communications are invited on any topic of interest; the writer's personal views, and facts from his experience bearing on our subjects, being preferred.

ADDITIONAL PROTECTION TO OUR PAPER MONEY.—Whatever tends to make our paper money more secure enhances its value. Though many safeguards have been thrown about it, still one quite weak and unprotected point remains. The operations of the counterfeiters have proved that we need additional protection. One of the most difficult, if not *the* most difficult thing, with them at present, is to obtain the necessary quantity of the peculiar paper on which the "greenback" is printed. Putting silk fiber into this paper was a great additional security. Paper with silk fiber being very difficult to obtain, the counterfeiters have resorted to the practice of washing small bills—obliterating all the printing thereon, and then using the paper for printing bills of a larger denomination. Additional security would therefore be obtained if we could prevent this practice.

Now, when the art of putting "water-lines" in paper is so well known, it would seem that it might be applied to this paper. If, after the manner of this "water-line" process, the figures of the different denominations were put upon the paper intended for the different kinds of bills, it would add much to the protection of the "greenbacks." Ten-dollar bills could only be printed upon ten-dollar paper, and so with twenties, fifties, etc.—each denomination on its respective kind of paper.

Argument in the case is hardly necessary. Let this paper be thus marked and the counterfeiters will find it more difficult to continue their illegitimate business, and whatever adds difficulty to the furtherance of their dishonest art tends to enhance the value of the "greenback." It would seem that all honest and intelligent persons would be interested in whatever protects our paper currency—the best the world ever saw. Every point that adds to its security adds a premium to its value and greater security to our business interests. L. P. N.

A PULPIT STATEMENT.—Study yourselves, and strive as you seldom have done to fathom your own actions and discover their causes. It is surprising how little we know of the reasons why we do certain things. Motives of which we take no cognizance have more influence than we are aware. In this connection I may be excused if I leave the direct line of my subject, to say he who neglects to study his mental and moral organization by the light of phrenological science, leaves undone a most important thing. I say phrenological *science*, because I would not have you imposed upon by quacks and charlatans. To be able to judge correctly of character from phreno-developments requires the study and experience of years.—*Extract from a sermon preached to the Third Unitarian Society, Brooklyn, Feb.* 11, 1883. [By L. A. R.]

INTUITION *vs.* HUMAN NATURE.—The name of the organ situated directly over Comparison, or rather between Comparison and

Benevolence, on the median line of the forehead, is commonly given as Human Nature. "This organ (to use the words of the 'Handbook of Phrenology and Physiognomy') furnishes us with an *intuitive* knowledge of character, or enables us to perceive the state of mind or feeling possessed by others, so that we may successfully adapt ourselves to them and operate upon their feelings." This I grant, but believe at the same time that the powers of this organ can not be confined to the intuitive knowledge of the human character. What right have we to think that this intuitive power is confined to this one function? Why should we stop here? If it can be exercised in that direction, why not in others? It has been my experience, and I am sure that of others who have made human character a study, that to a greater or less degree, in every one, there is a certain intuitive judgment of persons, things, etc., varying, of course, in correctness in different people. Now there must be some phrenological organ to show this power, and with this idea in view, I have noticed carefully those who had this power, and have found invariably that it corresponded to the size of the organ of Human Nature. When examining, I generally use the word *Intuition* instead of *Human Nature*, in naming the organ. And in describing the characteristics of the one being examined, I do not confine his intuitive powers to reading character, but make it general.

It might be interesting right here to give Webster's definition of intuition: "A distinct inspection of the mind; direct apprehension or cognition; an act of immediate knowledge, as in perception or consciousness, distinguished from mediate knowledge, as in reasoning." Now, this principle of intuitive knowledge has always been recognized as one of the component parts of the human character. Of course I am aware it has also been denied, but at the same time the great majority, I believe, are firmly convinced of its existence. It has been my experience, and probably that of others, that this organ is generally better developed in the female than in the male. And this reminds me of a remark made by some great French philosopher, that "never after patient toil, earnest investigation, and laborious reasoning, had he arrived at the solution of some great problem, but he found a woman had been there before him, *but she never knew how she got there.*" This was intended for a witty allusion to the opposite sex, as will be seen. We are compelled, however, to decide that she had as much right to her solution as he. The only difference between them was, that she used a different organ to reach it. We consider this indeed the highest development of human reason, and think it is rightly situated in the forehead above the other intellectual organs. It is a grand faculty, and, of course, liable to all degrees of power. Whereas some might rely on it almost infallibly because of its large development in their heads, others would have to be very cautious in accepting its judgments on account of its small degree of development and consequent feebleness. FRANK H. WHITE.

WILL-POWER.—The universe is run by the Divine will-power. Man's will-power is not a peculiar product of his own, but is the offspring of the universal will-power. "The Son is one with the Father," says Christ. Will-power can be condensed or rarefied, grossified or sublimated, but these different forms are one in substance, though different in degree and quality. In the first case we call it anger, wrath, rage; in the latter case it becomes faith or love. Faith and love are forms of sublimated will-power that grow in efficacy by their sublimation. To the degree that we refine and educate our will-power, to that degree we make it useful and applicable. It is the true homeopathic principle in its highest spiritual aspect that pervades all creation; that that which becomes destructive and endangers life and health, when used in condensed form, becomes regenerative and healing when applied in a very much finer and attenuated form. In the sexual effect this fundamental principle of truth becomes of peculiarly striking evidence, and as it is true in the spiritual and moral life of man, we may safely conclude that it will also be valid in his physical life, for the principles and laws of creation are the same in both forms of its manifestation. The same principle is applicable, and is, in fact, the only genuine remedy for the evil of drunkenness. When the life-principle of the cereals is extracted, and in highly condensed or grossified form taken as liquor, it becomes a deadly poison that burns up body and soul. Take it as nature prepared it in finely attenuated form—as unfermented breads and mush of wheat, barley, and maize, with grapes and fruits, and life, genuine life is restored, and the worst drunkard will be redeemed and become a man again.

All diseases can be cured—one might say, can only be cured—by will-power, or faith-power, or love-power. The finer, the more radiant, the more penetrating the power becomes. It is a strange infatuation, or deception, to believe that a physician or a drug cures a patient. The life of man is in his soul, and the life of the soul is its faith. A person that is not entirely grounded in faith to God or to Christ, or believes that the spiritual powers only control his soul and not his body, loses his organic faith when abnormal external conditions produce an acute form of disease. If the organic faith is not lost, any acute disease will be healed by the agency of nature alone, when the abnormal causes are re-

moved and normal conditions are put in its place. If the lost-faith-action is not restored by faith in a doctor or a certain form of medical treatment, the soul becomes sick and chronic disease is established, because the soul has lost its life, that is, its faith.

The faith of the soul manifests itself through the body by corresponding forms of breath, and the breath of faith—that is, the breath of life—is different in quantity and quality from the breath of doubt, or fear, or unbelief; the former gives life, the latter forms give death or paralyze life. When, by prayer or by whatever external cause, the soul is re-established in the attitude of faith, it regains the breath of faith, and thereby life and health are restored.

To the degree that we develop and discipline and educate our will-power, by applying it to uses in finer forms, we master the universe, and become conjoined to the spiritual powers of God. If we rely on our own individual supply of will-power we will find it soon exhausted, but if we tune our own will into accord with the universal or divine will, and subject it to the laws that regulate the latter as revealed, we can draw from the universal fund of will-power, and thereby become supplied with inexhaustible stores.

JULIUS ASHMAN.

PERSONAL.

THE Baron George Washington, of Gratz, Austria, belongs to a branch of the old English stock from which our first President came.

IT is stated that Miss Clara Barton has been offered the position of Superintendent of the Sherburne (Mass.) prison for women by Governor Butler.

GUSTAVE DORÉ was a lover of music. His voice was a rich baritone, and he played on piano, flute, guitar, and violin. When jested once upon his celibacy, he said, referring to his mother and his art, "What would you have? I am already twice married. Must a man be a Turk to prove that he is of domestic turn?"

ALEXANDER H. STEPHENS, one of the most prominent characters of the South, died March 3d, after many years of active industry kept up in spite of personal sufferings that would have compelled ordinary people to keep to their beds. He was born early in 1812. In 1836 he began public life in the State Legislature. In 1843 he was elected to Congress, and he was almost a continuous Representative from that year to 1882, except during the period of the Rebellion. Last year he was chosen Governor of Georgia. His personal appearance was remarkable. He had a large brain, but his weight was only ninety pounds, and in later years he always occupied a wheeled chair, being unable to walk. His voice was like that of a child. He was the author of a "Constitutional View of the War," of which 100,000 copies were sold, and also of a "History of the United States," just issued.

TIMOTHY O HOWE, Postmaster-General of the United States, died at Kenosha, Wis., March 25th. He was born in 1816 at Livermore, Me. In 1845 he removed to Wisconsin, where he became Chief Justice of the State, and afterward for eighteen years was State Senator. He was a member of the Monetary Conference which met at Paris in 1881. In December of the same year he was appointed Postmaster-General.

PETER COOPER, the widely-known philanthropist of New York City, died at his residence on Lexington Ave., April 4th last. A cold, followed by pneumonia, was the cause of his death, although but a few days before he had been out. The news of his death excited deep feeling throughout the city and neighborhood, for Mr. Cooper was one of the most esteemed men of our citizens—and most deservedly so. He was in his ninety-third year, but mentally fresh and earnest. In our next number we shall have more to say about him.

WISDOM.

"Think truly, and thy thought
Shall be a fruitful seed."

GOOD—the more communicated, more abundant grows.—MILTON.

NEVER run into debt if you can find anything else to run into.

FAITHFULNESS and sincerity are the groundwork of all true goodness.—CONFUCIUS.

IF you would lift me, you must be on higher ground. If you would liberate me, you must be free.—EMERSON.

KEEP trouble at arm's length. Never turn a blessing around to see whether it has a dark side to it.

A BAD man is like an earthen vessel—easy to break and hard to mend. A good man is like a golden vessel—hard to break and easy to mend. —*From the Hindoo.*

IT was a French woman who exclaimed, holding up a glass of sparkling fresh water, "Ah! if it were only wicked to drink this, how nice it would taste!"

BOOKS are endless, the sciences are many, time very short, and there are many obstacles. A man should, therefore, seek for that which is the

essence, as a swan seeks to extract the milk which is mixed with water.—*Hindu* (*Vriddha Chanakya*).

HEED how thou livest. Do no act by day
Which from the night shall drive thy peace away.
In months of sun so live that months of rain
Shall still be happy. Evermore restrain
Evil and cherish good, so shall there be
Another and a happier life for thee.
—WHITTIER.

MR. RUSKIN recently said to the English people: "You fancy you are sorry for the pain of others. Now, I tell you just this, that if the usual course of war, instead of unroofing peasants' houses, and ravaging peasants' fields, merely broke the china upon your own drawing-room tables, no wars in civilized countries would last a week."

MIRTH.

"A little nonsense now and then
Is relished by the wisest men."

A MAN lately applied at a butcher's shop for a "liver pad"!

THE perfectly square man is sure to be round at the right time.

"AND you wash your type with lye, do you?" said a visitor in a printing office. "Well, now I know how so many untruths get into the paper."

THAT young lady who made seven hundred words out of "conservatory" last fall has run away from home. Her mother wanted her to make three loaves of bread out of "flour."

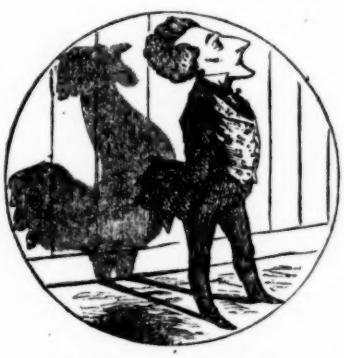
A VERY colored man who charged another with assaulting and beating him, on being told by the Judge that no marks were visible, indignantly rejoined, "Does ye s'pose he hit me wid a piece of chalk?" The trial proceeded.

DUMAS one day called upon a lady to present her with a copy of his last play. A physician was present who sneered, "Still dabbling in tragedies?" The dramatist answered, "Come, doctor; no jealousy! You know nobody can mistake my works for yours, as all your tragedies are bound in mahogany—mine in morocco."

"I THINK," said a fond parent, "that little Jimmie is going to be a poet when he grows up. He doesn't eat, and he sits all day by the fire and thinks and thinks." "You had better give him an oil bath," said Aunt Jerusha. "He's going to have the measles. That's what ails Jimmie!"

A TRAVELER was leaning at night against a railing at the Harper's Ferry railroad station. A locomotive came along, and he sprang lightly over the rail to escape possible danger. He thought it was a meadow on the other side, but knew his mistake when he struck a muddy stream forty feet below. On being rescued he was asked his name. "I wouldn't tell you for a thousand dollars," he replied. "Describe me simply as a fool."

A WELL-KNOWN Presbyterian clergyman of one of the lower Delaware counties, somewhat famous as a wit, was approached by a Baptist clergyman with the question, "Well, brother, we are going to have a new bell for our church. What sort would you recommend?" There was a twinkle behind the Presbyterian parson's glasses, and he answered promptly, "By all means, a diving-bell."



MR. STRUT insists that he is "no chicken," but all his friends are ready to admit that he has certain natural claims to being considered "the cock of the walk."

In this department we give short reviews of such NEW BOOKS *as publishers see fit to send us. In these reviews we seek to treat author and publisher satisfactorily and justly, and also to furnish our readers with such information as shall enable them to form an opinion of the desirability of any particular volume for personal use. It is our wish to notice the better class of books issuing from the press, and we invite publishers to favor us with their recent publications, especially those related in any way to mental and physiological science. We can usually supply any of those noticed.*

POEMS. By Augustus Watters. Paper. Price 50 cents. Published by the author.

Who that loves sweet and tender verse will find this little book acceptable to his taste. The vein of the writer is sad and plaintive for the most part, but the tone and sentiment are high and awaken emotions of the purest character. The Whip-poor-will, Indian Summer, The Robins, and The Haunted Tree, are of a quality much above the average of the verse published nowadays. Mr. Watters' muse is well worth cultivation, and we trust that we shall see more of his work. In saying this we feel that we express the wish of every one who has read his dainty little book.

A HANDBOOK OF ENGLISH AND AMERICAN LITERATURE — Historical and Critical; with Illustrations of the Writings of each successive Period. For the use of schools and academies. By Esther J. Trimble, late Professor of Literature in the State Normal School, Westchester, Pa. 12mo, pp. 518. Philadelphia: Eldredge & Brother.

The aim of the author in preparing this new volume is not so much to furnish the student a view of the beginning and progress of English literature by mere quotations from representative writers, with criticisms of their style and ascriptions of their place in the world's esteem, as to show how the literature of the successive eras from Caedmon to Tennyson reflects the character of its time, while she also endeavors to form a just estimate of the writers. She says well that "it is impossible to appreciate the literature of any period without some knowledge of the every-day life of the people." The work has the form of a connected history; the successive periods respectively having some dependence upon preceding periods. It is divided into seventeen chapters, each of which represents an era, which may be studied with care and elaboration in accordance with detailed suggestions or in an outline manner, which is the better course for the pupil of an average school, and a thorough examination be left to future leisure and opportunity.

The author has made the work an interesting one for school use, especially if in the hands of a judicious teacher; and we are pleased to note that she has not neglected American literature, although the limits of her book compelled a rather brief consideration of its merits.

OUR HOME PHYSICIAN: a Popular Guide to the Art of Preserving Health and Treating Disease; with plain advice for all the medical and surgical emergencies of the family. By George M. Beard, A.M., M.D., assisted by eminent medical authorities. Revised and enlarged edition. 8vo. pp. 1,506. Price $6.00 in cloth and $7.50 in sheep. New York.

We have occasion so frequently to examine and pronounce upon large volumes of the popular medical class, cyclopedias which are highly commended (by their publishers) to people as of great value as private or home advisers in matters of sickness and disease, that we open a fresh publication of the sort with some degree of hesitation, and yet we are gratified by the interest shown by the community in the diffusion of medical information—the growing desire of people to know something of their physical constitution, of the causes of disease, and of the rationale of their treatment when sick.

We are gratified on the one hand by the appearance of such a volume, because we know that the publisher has undertaken the costly work of its production because he is convinced that there is an existing demand for books of its character; and we hesitate in taking one up for reviewal, because we know that not a few of such books are made in a careless and cheap manner as commercial ventures, and a skillfully organized system of advertising is expected to give them a wide sale. The good "Family Physician" possesses a high value; its advice will often prevent serious results following apparently simple illness; in fact, its work is chiefly in the line of prevention, and that compilation which claims to instruct everybody in the treatment of diseases commonly known to society is a dangerous book to be placed in the hands of the masses. Only a quack would profess to furnish such a book.

We have examined this new candidate for popular favor with some interest, because of the name of its editor, Dr. George M. Beard—a man well known in New York scientific circles for his freedom from class bigotry and for his earnest disposition to look into the merits of new discoveries, especially of the biological sort. We regret his early death, for he was one of the few men in medical science who give it a progressive stimulus and whose highly enlightened minds and independent views give it character and dignity. The general arrangement of the topics of the volume show the hand of one familiar with the pen and conversant with their subject matter, and the clear, compendious style is well suited to the purpose of the work.

The space is chiefly occupied with a treatise on the anatomy and physiology of the human body; the influence of occupation on health; the laws of heredity; the nature of diet; stimulants and narcotics; air, sunlight, climate, exercise, electricity, etc.; directions for the care of the sick, the management of children, a description of recent discoveries and improvements in treatment, what to do in accidents, and much other information "adapted to the wants of the household and for those who are beyond the ready call of a physician."

The illustrations are generally faithful, especially the colored representations of skin diseases, and of the plants which have a place in the materia medica of the allopathic, eclectic, and homeopathic schools. A supplement by Dr. Samuel Lilienthal contains "a repertory of homeopathic treatment and remedies prepared expressly for the work," thus rendering it quite complete and a practical confirmation of the late advance in old-school medicine.

PUBLICATIONS RECEIVED.

REYNARD THE FOX. By E. Bulwer-Lytton. Engraved in phonic shorthand, with new and revised plates, by Eliza Boardman Burnz, Principal of Burnz's School of Shorthand. 12mo, cloth. pp. 55. Price 50 cents. A neatly printed book for the use of the student of shorthand. The phonographic characters are very clearly outlined, while the text in the ordinary print assists the young student to an understanding of the shorthand character.

LIFE OF ALFRED B. MEACHEM. By T. A. Bland. Together with his lecture, "The Tragedy of the Lava Beds." pp. 48. T. A. & M. C. Bland, Publishers, Washington, D. C. This is an appreciative sketch of the career of a noble, self-sacrificing man, well worthy the reading of all who feel any interest at all in questions relating to the American Indian. A fine steel portrait accompanies the pamphlet.

THE BATTLE OF THE MOY; or, How Ireland Gained her Independence, 1892-94. Lee & Shepard. Here we have an effort on the part of some sympathizer with the Irish aspiration for liberty which seems to us much after the style of "The Battle of Dorking," which created considerable stir in England a few years since. It is quite possible that Ireland will at some time secure autonomy in British affairs, but how it will be brought about seems to us "a thing which no fellow can find out." The author of "The Battle of the Moy" has produced a sanguinary little book, so far as the fighting is concerned.

TWELFTH ANNUAL REPORT of the Board of Trustees of the Ohio State University to the Governor of the State of Ohio for the year 1882. An elaborate and comprehensive view of work done in all the departments of State education.

LITTLE PLAYMATES' WALTZ, composed by Charlie Baker. Price, 25 cents. F. W. Helmick, publisher, Cincinnati.

SIX FEET OF EARTH. Motto Song. Words by J. A. Guelick; music by James E. Stewart. Price 35 cents. F. W. Helmick, publisher, Cincinnati, O.

PLYMOUTH PULPIT. A weekly publication of sermons preached by Henry Ward Beecher. We have received the weekly issues in this series with regularity from the publishers, Fords, Howard & Hurlbert, New York City.

NEW "NORMAL" BOOKS. J. E. Sherrill, of the Normal Publishing House, Danville, Ind., has in press "The School and Institute," by Prof. J. Fraise Richard; "Methods of Teaching and School Management," by Prof. J. V. Coombs, Pres. of East Illinois College; and "Arithmetical Analyses and Topical Outline Lessons," designed to accompany Ray's Third Part Arithmetic, by Prof. W. H. F. Henry.

HARPER'S NEW MONTHLY MAGAZINE for March gives us glimpses of Holland and Arizona, and also a historical retrospect of the early discoveries on the Canadian frontier by French navigators. A very opportunely and finely illustrated description of Wagner's last opera, Parsifal, is included in the plump Number.

SAFETY ON LAND AND SEA. Time without a watch or chronometer; amusement, instruction, etc.; planisphere of the stars. Improved by Dr. Wm. F. Thoms, Pres. Am. Humane Society, New York Nautical School, etc. An interesting pamphlet, containing in a condensed form a good deal of practical astronomy.

MUNSON'S PHONOGRAPHIC NEWS, Monthly. No. 40, for January, is chiefly made up of matter of interest to the shorthand fraternity, printed in phonographic characters.

UTAH AND ITS PEOPLE. Facts and Statistics bearing on the Mormon problem. By a Gentile. If one-half of the showings of this pamphlet be true, a city controlled by Mormon civilization is happier than it would be under Christian. The taxes are represented as low, so low that Utah ought to be a farmer's paradise; and as compared with other States and Territories, this Gentile says there are few liquor saloons and disreputable places in Utah; and where such places exist, they are run and sustained by anti-Mormons. He also says that 93 per cent. of the gamblers in Utah, and 95 per cent. of the lawyers, are Gentiles. But this sort of evidence, good as it is, would not convert us to Mormonism, so long as polygamy is upheld as a cardinal virtue in its system.